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THE  
MEDICAL ASSISTANT,

A LARGE AND VALUABLE  
FAMILY WORK,

CONTAINING IN PLAIN AND SIMPLE LANGUAGE THE NATURE  
AND TREATMENT OF DISEASES,

MUCH OF WHICH HAS BEEN TAKEN FROM THE  
MOST APPROVED FAMILY WORKS

NOW IN USE; WHILE

THE TREATISES ON THE  
DISEASES PECULIAR TO THIS CLIMATE

HAVE BEEN PREPARED

EXPRESSLY FOR THIS WORK.

IT ALSO CONTAINS A  
MATERIA MEDICA, A DISPENSATORY,

NURSE'S GUIDE AND DIET FOR SICK.

A GLOSSARY

IS ATTACHED TO EXPLAIN THE MEDICAL TERMS USED IN THE BOOK.

BY D. G. M. HORR, M. D.,

WHO HAS PRACTICED MEDICINE IN THE SOUTH MORE THAN THIRTY YEARS.

NASHVILLE.

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## PREFACE.

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ON the following pages will be found laid down, in a plain and comprehensive manner, adapted to the capacity of any common, plain scholar, a treatise on all the diseases common in this country: embracing, as far as is practicable to carry out the intention of this work, their causes, and a more minute detail of their symptoms, preventives, and remedies. Also, a few general rules for the preservation of health by air, regimen and exercise, which will be found of great importance, and, if strictly attended to, will, in many instances, supersede the necessity of resorting to the use of medicines. The 'Nurse's Guide,' and a few pages devoted to prescriptions of diet for the sick, will also be found very useful.

Though much of this work (and that too without the formality of quotations) has been taken from Norwood, Goodlett, and others, of the latest and most approved family medical authors, yet the treatises on the diseases peculiar to this climate have, very carefully, been prepared expressly for this work.

As this volume is designed chiefly for the use of families, great pains have been taken to avoid the technicalities and absurdities with which so many authors of family works have so erroneously cloaked and confounded their language. In some instances, however, in order to render the matter concise, and dispense with a long routine of words which might be comprised in one or two medical words, it has been found necessary to use a few of the most common technical terms, for the explanation of which, a GLOSSARY, complete and accurate has been prepared, giving the definition of many very common words, as well as the technical phrases used in this Book.

As all works of this character have met with more or less opposition, among the unlearned, as well as among those of the profession, it is hardly supposable that this, the largest and most complete family work ever published, will pass unnoticed. Some will allege that those who do not make the science of medicine their study and profession, should not have access to such a book; which is, in effect, saying that they should be kept ignorant of the science. But the falsity of such doctrine, and the importance that every one should have, at least, a slight knowledge of medicine and the nature of diseases, is evident from several reasons: *First*, that a brief theoretical as well as practical knowledge of Medicine is a qualification indispensable to a good nurse, and that, as every experienced person will admit, in nine cases out of ten, as much depends on good nursing as on medical aid: for, however skilful a physician may be, and however judicious the course he pursues, in a dangerous case, his efforts are in vain without the assistance of a good, cautious nurse. *Secondly*, that, unless

the physician is very convenient, he cannot get to the patient in time to give relief. *Thirdly*, that there are many people who, from ignorance, are so prejudiced, that in any case whatever they will neither give medicine themselves nor allow a physician to give it; and that a little knowledge on the subject will eradicate all such superstitious notions. There are others, again, who attend to their own families, and will not employ a physician, and such men should, by all means, have a guide to assist them in discriminating the disease and administering the remedies. And, it is sincerely hoped, that this work will have the desired effect, and spread useful knowledge through the country, and prove a companion, useful to families and beneficial to the community.



1. Trunk of the pulmonary artery.  
 2. The left branch of the pulmonary artery.  
 3. The aorta and its great arch.  
 4. The common root of the right sub-clavian and ear-  
 oid, which are seen branching off above to the  
 arm and head.  
 5. The left carotid artery.  
 6. The intercostal arteries on the left side. Those on  
 the right are seen opposite.  
 7. Descending aorta.  
 8. The cerebral carotid.  
 9. The submental artery.  
 10. The labial artery,  
 11. The temporal artery.  
 12. The coronary artery of the upper lip, and the na-  
 salis arising from it.  
 13. The temporal artery passing through the carotid.  
 14. The sub-calvian artery.  
 15. The scapular artery.  
 16. Trunk of the radial and ulnar arteries.  
 17. A branch from the radial artery, making the super-  
 ficial palmar arch.  
 18. The recurrent radial artery.  
 19. The dorsal branch of the hand.  
 20. The recurrent ulnar artery.  
 21. The interosseal artery.  
 22. Abdominal aorta.  
 23. The hepatic and splenic arteries.  
 24. The superior mesenteric.  
 25. The left renal artery.  
 26. The middle sacral artery.  
 27. The right and left iliac arteries.  
 28. The femoral artery.  
 29. The posterior tibial artery.  
 30. The anterior tibial artery.  
 31. Continuation of the trunk of the tibial artery.  
 32. Anterior tibial artery of the left leg.  
 33. The lower internal circumflex of the knee.  
 34. The metatarsal arch.



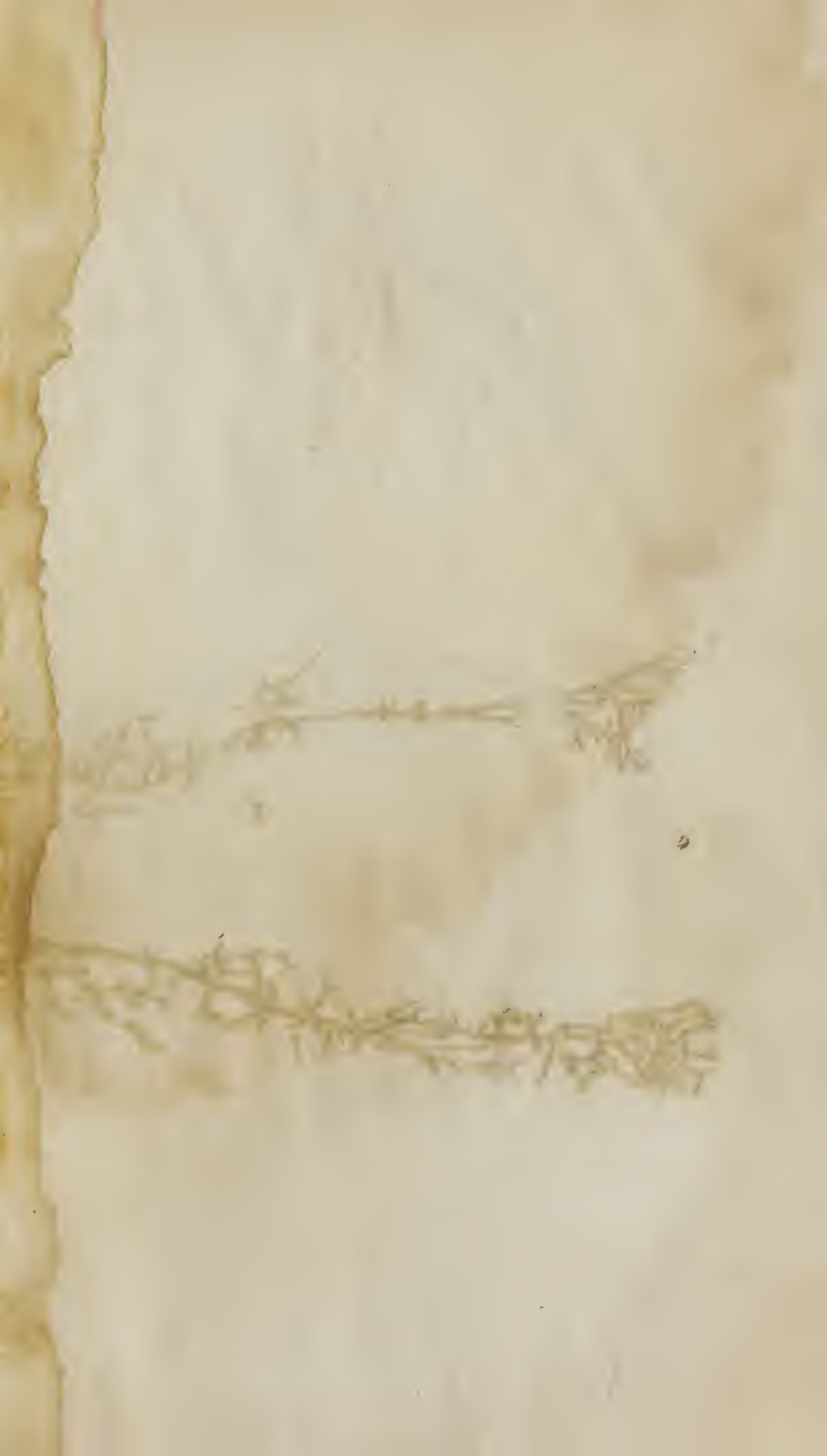


1. The heart in its situation, but a little drawn down, from its weight, so that the roots of the Great Vessels are visible.

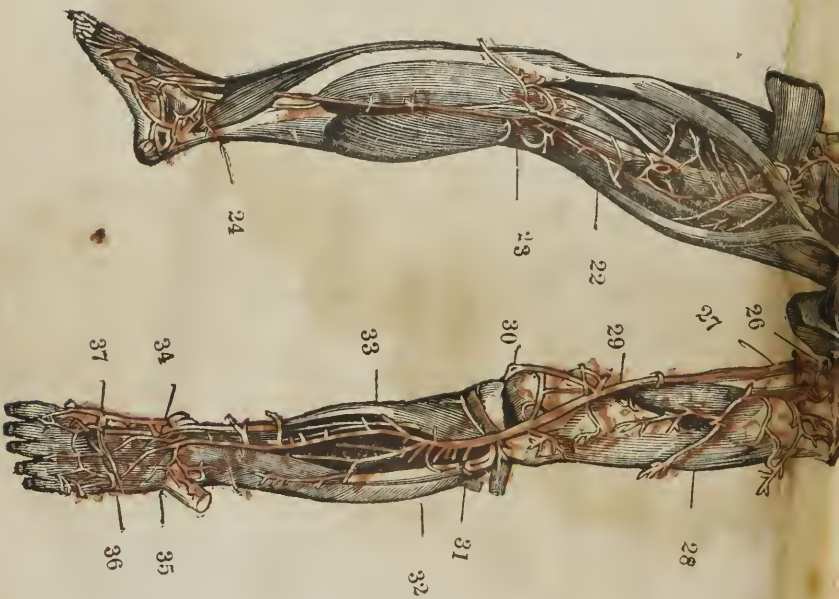
# ARTERIES.—PLATE I.







1. 2. The occipital arteries.
3. Branch of the posterior temporal artery.
4. Occipital artery.
5. The dorsal artery of the scapula.
6. Trunk of the axillary artery.
7. Inferior sagittary artery.
8. Trunk of the humeral artery.
9. The ulnar, or the large branch of the interosseal, going to the wrist.
10. Part of the radial artery.
11. The carpal arch.
12. The radial branch, passing to the palm.
13. The superior dorsal artery of the scapula rising from the thyroid
14. Trunk of the axillary artery.
15. Deep seated branch of the humeral.
16. The great dorsal interosseal artery.
17. The radial branch.
18. The carpal arch.
19. The radial artery.
20. Posterior iliac.
21. Ischiatic artery.
22. Trunk of the crural artery laid bare.
23. The place where the popliteal artery hides itself.
24. Anterior peroneal artery.
25. Posterior iliac artery.
26. Trunk of the femoral artery.
27. A deep branch.
28. Deep seated branch of the femoral artery.
29. Trunk of the femoral artery.
30. The internal superior articular artery of the knee.
31. Anterior tibial artery.
32. Posterior peroneal artery.
33. Posterior tibial artery.
34. The internal plantar artery.
35. The external plantar artery.
36. The plantar arch.
37. Trunk of the anterior tibial artery.

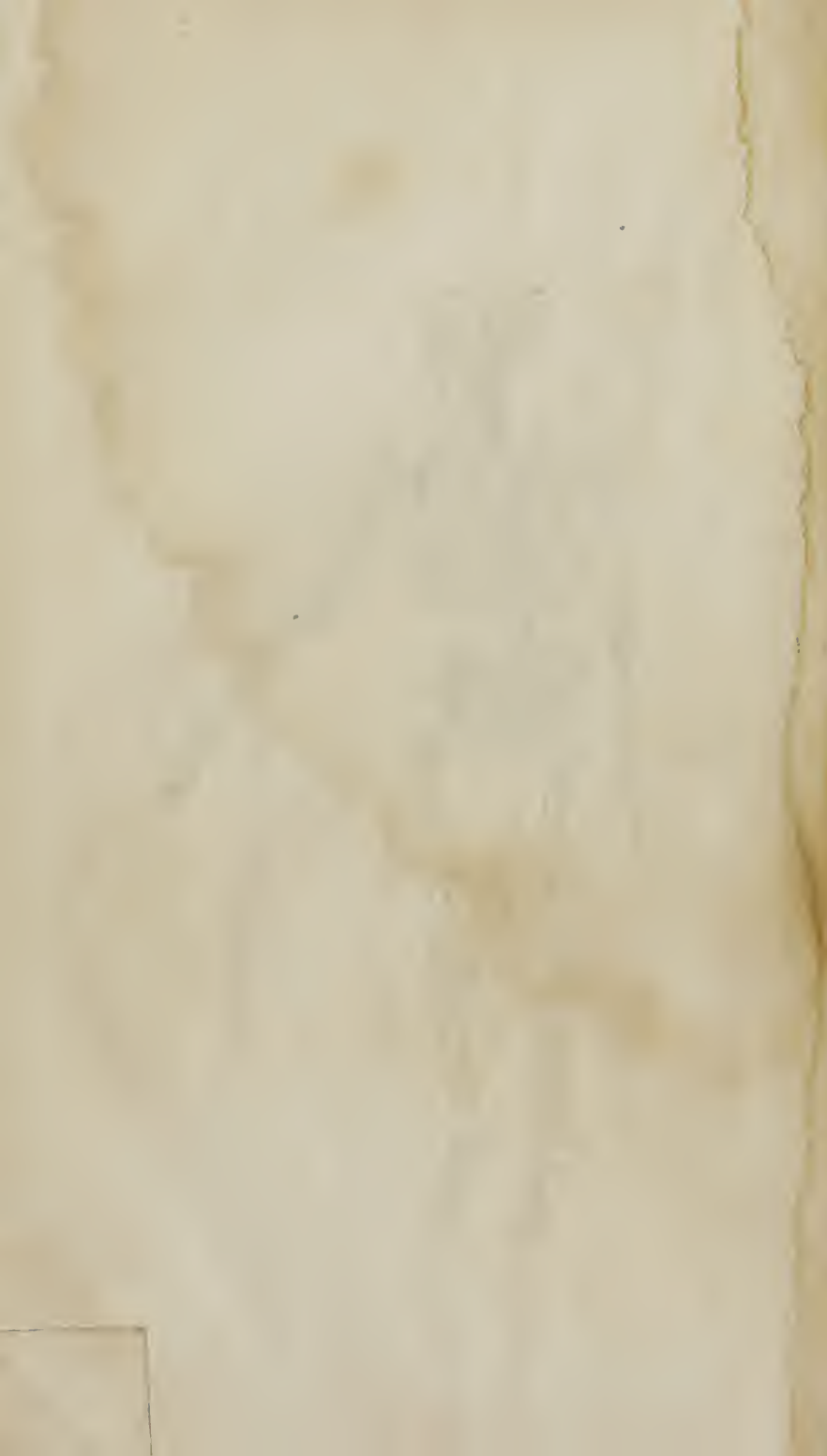












# THE MEDICAL ASSISTANT.

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## PART I.

### OBSERVATIONS ON DIET.

No creature eats such a variety of food as a man. Intended for an inhabitant of every climate, he devours the productions of them all; and if they do not suit his palate, or agree with his stomach, he calls in the aid of cookery, an art peculiar to himself; by which many things that, in a crude state, would prove hurtful, or even poisonous, are rendered wholesome and salutary.

The obvious division of food is into animal and vegetable. To say that man was intended by nature for using either the one or the other alone, would be absurd. His structure and appetite prove that he was formed for both. Judgment, however, is requisite in adjusting the due proportion of each, so as to avoid the inconveniences arising from an extreme on either hand.

Though animal food is more nourishing than vegetable, it is not safe to live on that alone. Experience has shown that a diet, consisting solely of animal food, excites thirst and nausea, occasions putrescence in the stomach and bowels, and finally brings on violent griping pains, with cholera and dysentery.

Animal food is less adapted to the sedentary than the laborious, and least of all to the studious, whose diet ought to consist chiefly of vegetables. Indulging in animal food renders men dull, and unfit for the pursuits of science, especially when it is accompanied with the free use of strong liquors.

The plethoric, or persons of a full habit, should eat



sparingly of animal food. It yields far more blood than vegetables taken in the same quantity, and, of course, may induce inflammatory disorders. It acts as a stimulus to the whole system, by which means the circulation of the blood is greatly accelerated.

I am inclined to think that consumptions, are in part owing to the great use of animal food. Though pulmonary consumption is not, properly speaking, an inflammatory disease, yet it generally begins with symptoms of inflammation, and is often accompanied with them through its whole progress.

Improper diet affects the mind as well as the body. The choleric disposition of the English is almost proverbial. Were I to assign a cause, it would be, their living so much on animal food. There is no doubt that this induces a ferocity of temper unknown to men whose food is taken chiefly from the vegetable kingdom.

Though these and similar consequences may arise from the excess of animal diet, we are far from discouraging its use in moderation. In all cold countries it is certainly necessary; but the major part of the aliment ought, nevertheless, to consist of vegetable substances.

With regard to the proportion of vegetable food to that of animal, great nicety is by no means required. It must vary according to circumstances, of the heat of the weather, the warmth of the climate, and the like. The vegetable part, however, where nothing forbids, ought certainly to preponderate, and I think in the proportion at least of two to one.

I am no enemy to good fruit, as an article of diet; but the greater part of what is used is mere trash.—Fruit should be eaten in the early part of the day, when the stomach is not loaded with food, and it never ought to be eaten raw till it is thoroughly ripe.

*Of Bread.*—Bread, or something resembling it, makes a part of the diet of all nations. Hence it is emphatically denominated *the staff of life*. It may, however, be used too freely. The late Dr. Fothergill was of opinion, and I perfectly agree with him, that



most people eat more bread than is conducive to their health. I do not mean to insinuate that bread is unwholesome, but that the best things may prove hurtful when taken to excess. A surfeit of bread is more dangerous than one of any other food. The French consume vast quantities of bread; but its bad effects are prevented by their copious use of soups and fruits.

One important use of bread is to form a mass fit for filling up the alimentary canal, and carrying the nutritious juices along that passage in such a state as to render them fit to be acted upon by the lacteal absorbents, which take up the nourishment, and convey it to the blood. In this light, bread may be considered as a soil from whence the nourishment is drawn. I do not say that bread contains no nourishment, but that its use, as an article of diet, does not solely depend on the quantity of nutriment it contains, but in some measure on its fitness as a vehicle for conveying the nutritious particles through the intestinal tubes. Hence it follows, that the finest bread is not always the best adapted for answering the purposes of nutrition.

The richest food will not nourish an animal, unless the alimentary canal is sufficiently distended. A dog has been fed on the richest broth, yet could not be kept alive; while another, which had only the meat boiled to a chip, and water, throve very well. This shows the folly of attempting to nourish men on aliment powders and other concentrated food.

The great art, therefore, of preparing food, is to blend the nutritive part of the aliment with a sufficient quantity of some light farinacious substance, in order to fill up the canal, without overcharging it with more nutritious particles than are necessary for the support of the animal. This may be done either by bread, or other farinacious substances, of which there is a great variety, as will appear from the sequel. .

People imagine, as the finest flour contains the greatest quantity of nourishment, that it must therefore be the most proper for making into bread; but this by no means follows. The finest flour comes the nearest to starch, which, though it may occasionally prove a good

medicine, makes bad bread. Household bread, which is made by grinding down the whole grain, and only separating the coarser bran, is, without doubt, the most wholesome.

Bread is often spoiled to please the eye. The artificially whitened, drying, stuffing bread, though made of the heart of the wheat, is, in reality, the worst of any; yet this is the bread which most people prefer.

All the different kinds of grain are occasionally made into bread, some giving the preference to one and some to another, according to early custom and prejudice. The people of South Britian generally prefer bread made of the finest wheat-flour, while those of the northern countries eat a mixture of flour and oatmeal, or ryemeal, and many give the preference to bread made of oatmeal alone. The common people of Scotland also eat a mixed bread, but more frequently bread of oatmeal only. In Germany the common bread is made of rye, and the American thinks no bread so strengthening as that which is made of Indian corn; nor do I much doubt but the Laplander thinks his bread made of the bones of fishes is the best of any.

Bread made of different kinds of grain is more wholesome than what is made of one only, as their qualities serve to correct one another. For example, wheat flour, especially the finer kind, being of a starchy nature, is apt to occasion consumption. Bread made of rye-meal, on the other hand, proves often too slippery for the bowels. A due proportion of these makes the best bread.

For the more active and laborious I would recommend a mixture of rye with the stronger grains, as peas, beans, barley, oats, Indian corn, and the like. These may be blended in many different ways: they make a hearty bread for a laboring man, and, to use his own language, they lie longer on his stomach than bread made of wheat-flour only. Barley-bread passes too quickly through the alimentary canal to afford time for conveying the proper nourishment; but bread made of barley mixed with peas is very nourishing.

A great part of the bread consumed in every country

is by children. It is always ready, and when the child calls for food, a piece of bread is put into its hand to save the trouble of dressing any other kind of victuals. Of many children this is the principal food, but it is far from being the most proper. Children are often troubled with acidities of the stomach and bowels; and it is well known that bread mixed with water, and kept in a degree of heat equal to that of the human stomach, soon turns sour.

[Of the two kinds of bread, the unleavened (a simple mixture of meal and water) is preferable, if prepared from the *unbolted* flour; but that made with the fine white flour, such as crackers and pilot bread, is always of a viscid indigestible nature, unless mixed with butter or lard to render it more friable and porous, in which case it is still more prejudicial. Bread should not be eaten until it is at least twelve hours old.

"New bread," says Dr. Turnbull, "contains much indigestible paste; and its fixed air, not being entirely expelled, becomes extracted in the stomach, and produces flatulence, cramp, and indigestion. This effect is easily prevented, either by keeping the bread till stale, or toasting it." "Hot bread is not so healthy as cold, being more indigestible, and very apt to clog and oppress many people's stomachs."—(*Rickeson*.) "Bread," says Dr. Paris, "should never be eaten *new*; in such a state it swells, like a sponge, in the stomach, proving very indigestible. Care should also be taken to obtain bread that has been duly baked. Unless all its parts are intimately mixed, and the fixed air expelled, it will be apt, in very small quantities, to produce acescency and indigestion." Dr. Willich says, "new baked bread always contains much of an indigestible paste; which is remedied, either by allowing it to dry for two or three days, or by toasting it. Stale bread, in every respect, deserves the preference; and persons troubled with flatulency, cramp of the stomach, and indigestion, should not, upon any account, eat *new* bread, and, still less, *hot rolls* and *butter*." Many years' close observation, led Dr. Mease to the conclusion, that—"During the years of youth, when the natural vigor of the stamina is daily



deriving an accession of strength,—or, in constitutions enjoying greater powers of the stomach than are absolutely required for the purpose of digestion, fresh bread may be eaten with impunity for years; but I will venture to assert, (says he,) that every meal, in which it is taken, will detract some little from the powers of that organ; and that, in time, it will show its effects.”]

*Boiled Grain.*—Though farinacious substances, of one kind or another, make a necessary part of the food of man, yet there can be no reason why such substances should always assume the name and form of bread. Many of them are more wholesome, and not less agreeable, in other forms. Bread is often used merely to save the trouble of cookery; and, being portable, is the most convenient article of diet for carrying abroad.

It does not, however, admit of a doubt, that more grain is eaten boiled than is made into bread; and that this mode of cookery is the most wholesome. Simple boiling precludes all adulteration, and is an operation much less laborious and artificial than baking.

The most general article of diet among mankind is rice. This may be made into a variety of dishes; but simple boiling is all that is required, to render it a proper substitute for bread. It may either be eaten alone, or with milk. In the east, it is used with meat, in the same manner as we do bread. The people of this country believe that rice proves injurious to the eyes; but this seems to be without foundation, as it has no such effect on those who make it the principal part of their food.

Many other kinds of grain will, when boiled, make good substitutes for bread. Even those which make a harsh and unpleasant sort of bread, are often rendered very palatable by boiling. This is the case with all the leguminous class of plants, as peas and beans. Even oats and barley are more agreeable, as well as more wholesome, when boiled, than made into bread.

All allow that peas and beans, boiled, when young, are a great luxury; but when old, they are equally wholesome, and when properly cooked, by no means

unpleasant. There are few who do not relish peas-pudding, and even prefer it to bread. Beans are not so fit for this purpose; but they make an excellent ingredient in both, and whoever eats this broth will find little occasion for bread.

Peas and beans contain an equal quantity of sugar with wheat, oats, or barley, and at the same time a greater proportion of oil, consequently are more nourishing. This fact is confirmed by daily experience.

Nature seems to have pointed out the propriety of the extensive use of peas and beans; it being a fact, that when crops of that kind are duly alternated with crops of wheat, barley, or oats, the fertility of the soil may be maintained, without rest or manure, for many years together. Whereas, if the latter be raised on the same soil for several years successively, they render it barren, so that, without rest or manure, its fertility cannot be preserved.

Barley is one of the best ingredients in soup. Count Rumford says, it possesses the quality of lithing, or thickening, soups, in a superior degree to any other grain. We have reason, however, to believe that grits, or coarse oatmeal, will answer that purpose still better.

Oatmeal is frequently made into bread; but it is a much more wholesome, as well as agreeable food, when made into hasty-pudding, and eaten with milk.

The opinion of oatmeal being heating, and occasioning skin diseases, is wholly without foundation. Bread made of oatmeal, when not leavened, will sometimes occasion the heart-burn; but this is no proof of its heating quality. Unleavened bread, of wheat or any other grain, produces the same effect on a debilitated stomach. Oatmeal thoroughly boiled seldom gives the heart-burn.

Persons who are fed on oatmeal-bread, or hasty-pudding, are not more subject to diseases of the skin, than those who live on wheat-meal. Cutaneous disorders proceed more from the want of cleanliness, than from any particular aliment.

A lieutenant of the army, residing at a country village within a few miles of Edinburgh, with a wife and ten

children, having no other income than his half-pay, fed the whole of his children with hasty-pudding and butter-milk only, from a conviction that it was the most wholesome and full diet that fell within the reach of his narrow circumstances. They grew apace ; and it was the universal remark of the neighborhood, that they were as sprightly, healthy, and robust, as other children, and at the same time perfectly free from all skin-diseases.

Children are seldom well, unless when their bodies are gently open. But this is more likely to be the case when fed on oatmeal and milk, than with a starchy substance made of the finest flour ; yet this is the common food of children.

The American, the Italian, and the German, all cook Indian corn, in the same way as the North Briton does his oatmeal, by making it into hasty-pudding. It may be eaten in a variety of ways. Some eat it with a sauce composed of butter and brown sugar, or butter and molasses. Others eat it with milk only. In either way it makes a good, cheap, and wholesome diet, by no means disagreeable to those who are accustomed to it.

The only other grain we shall mention, as best when boiled, is buck-wheat : it is of a very mucilaginous nature, and, of course, highly nutritious. In several parts of Europe it constitutes a principal part of the food of the lower people. In former times it was eaten in Russia ; not by the lower classes only ; even the nobility made use of it. Boiled, and then buttered, it was such a favorite of the great Czar Peter, that he is said seldom to have supped on any thing else.

*Butter.*—Butter, though a good article of diet, may be used too freely, and in this country, I am convinced, that is the case. To weak stomachs it is hurtful, even in small quantities, and when used freely it proves prejudicial to the strongest.

Butter, like other things of an oily nature, has a constant tendency to turn rancid. This process, by the heat of the stomach, is greatly accelerated, insomuch that many people, soon after eating butter, complain of its rising in their stomachs, in a state highly disagreea-



ble. Oils of every kind are with difficulty mixed with watery fluids. This is the reason why butter floats in the stomach, and rises in such an unpleasant manner.

Persons afflicted with bile should use butter very sparingly. Some sceptical authors doubt whether or not aliment of any kind has an effect on the bile. One thing, however, is certain, that many patients, afflicted with complaints which were supposed to be occasioned by bile, have been completely cured by a total abstinence from butter.

The most violent bilious complaints that I ever met with, were evidently occasioned by food that became rancid on the stomach, as the cholera morbus, and the like. Nor can such complaints be cured, till the rancid matter is totally evacuated by vomiting and purging.

But supposing butter did not possess the quality of becoming rancid on the stomach, it may, nevertheless, prove hurtful to digestion. Oils of all kinds are of a relaxing quality, and tend to impede the action of digestion. Hence the custom of giving rich broths and fat meats to persons who have a voracious appetite.

The free use of butter, and other oily substances, not only tends to relax the stomach and impede its action, but to induce a debility of the solids, which paves the way to many maladies.

Children, without exception, are disposed to diseases arising from relaxation. Butter, of course, ought to be given to them with a sparing hand. But is this the case? By no means. Bread and butter constitute a great part of the food of children, and I am convinced that the gross humors with which they are frequently troubled are partly owing to this food. As children abound with moisture, bread alone is, generally speaking, better for them than bread and butter.

Oils, in certain quantities, excite nausea, and even vomiting. They must, of course, prove unfriendly to digestion. A Dutch sailor, we are told, can digest train oil. So may any sailor; but it would be very improper food for a lady.

To some of the leaner farinaceous substances, as the potato, butter makes a very proper addition; but eating

it to flesh and fish, of almost every description, is certainly wrong. The meat eaten in this country, is generally fat enough without the addition of butter; and the more oily kinds of fish, as salmon or herrings, are lighter on the stomach, and easier digested, when eaten without it.

Butter is rather a gross food, and fitter for the athletic and laborious, than the sedentary and delicate. It is less hurtful when eaten fresh than salted. Salt butter certainly tends to induce skin diseases, and I am inclined to think, the free use of it at sea may have some share in bringing on that dreadful malady, so destructive to sailors, *the sea-scurvy*.

There is a method of rendering salt butter less hurtful, but it seems not to be generally known. What I mean is, to mix it with an equal quantity of honey, and keep it for use. In this way it may be given to children with greater freedom.

Butter, in itself, is not near so hurtful, as when combined with certain other things. For example: bread made with butter is almost indigestible, and pastries of every kind are little better; yet many people almost live upon pastry, and it is universally given to children. It is little better, however, than poison, and never fails to disorder their stomachs.

I have known a man seemingly in perfect health, who, by eating a pennyworth of pastry, as he passed along the street, was seized with such an asthmatic-fit, that he was obliged to be carried home, and had nearly lost his life. This occurred whenever he inadvertently ate any thing baked with butter.

Every thing that proves very injurious to health, ought, as far as possible, to be prohibited. A duty on pastry would be serving the public in more respects than one. It would save many lives, and lessen some tax on necessities.

Cheese, as a diet, is likewise injurious to health. It should never be eaten but as a dessert. It occasions constipation, and excites a constant craving for drink. It is very improper for the sedentary, and hardly to be digested even by the athletic.

If men will live on dry bread, poor cheese, salt butter, boiled bacon, and such like parching food, they will find their way to the ale-house, the bane of the lower orders, and the source of half the beggary in the nation.

*Fruits and Roots.*—Fruits and roots form a large class of the substitutes for bread. The latter, being produced under-ground, are less liable to suffer from the inclemency of the seasons than grain.

In warm climates the inhabitants have many substitutes for bread: and as their seasons are more uniform than ours, they can generally depend on the plant, or whatever it is, proving productive. The plantain-tree, commonly called the Indian fig, which has from time immemorial been cultivated in South America, bears fruit of a sweetish taste, which will dissolve in the mouth without chewing. It is eaten either raw, fried, or roasted. When intended to supply the place of bread, it is gathered before it is ripe, and eaten either boiled or roasted. The banana is nearly of the same nature, but its fruit is greatly superior both in taste and flavor.

The inhabitants of the South Sea, or Ladrone islands, are supplied with bread from a tree, which has lately been imported into the West India islands, and will, it is hoped, be found to answer the same purpose there. It has a slight degree of sweetness, but not much flavor. It resembles new bread, and requires to be roasted before it is eaten. Those who have tasted it, say, that it is in no respect superior to the potato.

In some of the West India islands the inhabitants supply the place of grain by making bread from the root of a shrub, called the cassada, or cassava.

But the most general substances for bread in the West Indies are the yams. There are three different species of this plant, the roots of which are promiscuously used for bread. They are said to be very nutritious, of easy digestion, and when properly dressed, are by some preferred to the best wheaten bread. The taste is somewhat like the potato, but more luscious.—The negroes generally eat them boiled, and beaten into a mash. The white people have them ground into

flour, and make bread and puddings of them. They can be preserved for several seasons, without losing any of their primitive goodness.

Of all the substitutes for bread in Europe, the potato is the most extensively useful. As this plant thrives in every soil, and seldom suffers from an inclemency of seasons, we must blame ourselves if we suffer a famine to exist. Indeed no such thing ever can be, where due attention is paid to the culture of potatoes. A far greater quantity of farinacious food can be raised on an acre of ground planted with potatoes, than sown with any kind of grain. It is not uncommon to have a return of forty to one. They are not so hearty a food as corn, but no man will ever perish of hunger who can have potatoes.

Potatoes abound with an insipid juice, which induces some to think that they are not very nutritious. Facts, however, are against this opinion. Some of the stoutest men, we know, are brought up on milk and potatoes. Dr. Pearson, who has bestowed some pains in analyzing this root, says, that potatoes and water alone, with common salt, can nourish men completely. They differ in color and consistence, but not materially with regard to their nutritive qualities.

Some think the firm kind are the most nutritious; but the Irish, who must be good judges, give the preference to the mealy. The difference, however, depends much on the mode of cooking them.

More than half the substance of potatoes consist of water, and experience shows, that the mode of cooking, which most diminishes the moisture is to be preferred.

They are dressed in a variety of ways, but simple boiling or roasting seems to be all the cooking they require, to render them a proper substitute for bread.—Some are fond of making bread of them. This, in my opinion, is marring both. Why manufacture any thing into bread, which requires only the aid of fire to make it such? Nobody thinks of making dough of the bread-fruit; but the potatoe might with as great propriety be called the bread-root, as it is made into bread by the same process.



When potatoes are used in broths or stews, they ought previously to be boiled, and the water thrown away, as it contains something deleterious. Simple boiling or roasting is sufficient to prepare potatoes to supply the place of bread, but when they are intended to serve as a meal, they require something of a softening nature, as milk, butter, or broth. [The process of mashing them, certainly, does not contribute to their digestibility. By such a process they are not so intimately mixed with the saliva: and when they are impregnated with the fat of roast meat, they should be studiously avoided.] Horses are sometimes fed with potatoes, and become very fond of them. With the addition of a small quantity of hay, they are found to be sufficiently nourishing.

Some think that the potato, unless it be made into bread, will not keep. An accident taught me the contrary. Many years ago a friend of mine sent me a potato, after it had been roasted in an oven, on account of its singular figure. I laid it on a shelf among some other things of the like kind, and was surprised, on removing them many years after, to find the potato quite fresh, though as dry as a bone. On grating it down, it was perfectly sweet; and as fit for making soup as the day it was roasted. I apprehend that nothing made into bread would have kept so long.

Many other domestic roots, sprouts, &c. are very wholesome, and many occasionally supply the place of bread. Of these Mr. Bryant reckons above forty; but we shall only take notice by way of specimen, of the most useful and productive. It is worthy of remark, that no nation can be very populous, which does not draw a great part of its food from under-ground.

The Jerusalem artichoke is a native of Brazil, but having been long cultivated in this country, it is too well known to need any description. From its taste, which is like that of artichoke-bottoms, it would seem to be nutritious, and is far from being unpleasant to the palate. Some reckon it windy, but this may be corrected in the cooking, by warm spices; and as the plant is very pro

ductive, we should recommend it to be used in the same manner as potatoes, and the other farinacious roots.

Of the esculent roots in this country, the parsnip is reckoned the most nourishing. It is likewise of easy digestion, and is agreeable to most palates. Some, indeed, dislike it on account of its sweetness; but this is a proof of its nutritive quality, sugar being the most nourishing thing in nature.

There is not any plant that affords a more striking proof of the benefits of culture than the turnip. In its wild state it is good for little or nothing; but when properly cultivated, it not only affords wholesome nourishment for man, but furnishes the principal winter food for cattle. There is a species of this plant called the yellow turnip, which is sweet, and of a superior quality. The yellow turnip is the most nourishing, and also the most hardy in sustaining the winter. It is eaten with milk to cure the consumption and scurvy. Margraaf says, he could extract no sugar from the turnip, which affords ground to conclude, that it is not so nutritive as certain other roots. "It ought to be well boiled, and the watery parts separated by pressure." Not only the root of the turnip, but the tops, when young, make very pleasant greens. The sprouts, if gathered when very tender, make an excellent salad.

The Carrot, like the turnip, is good for little in its natural state, being small, tough, and stringy. Manured, it grows large, succulent, and of a pleasant flavor. It ought, however, to be eaten young, otherwise it lies on the stomach, and is hard of digestion. It is an ingredient in several soups, and, being solid, may in some measure supply the place of bread.

Salsafy, skirrets, and the several kinds of beets, are all pleasant and nourishing. They are likewise of easy digestion, and may be dressed in a variety of ways. Margraaf has, by experiments, discovered, that both skirrets and beets contain a considerable quantity of sugar.

The Onion, we are told, was a great favorite in Egypt four thousand years ago, and Dr. Hasselquist says, it is not to be wondered at, for whoever has tasted the onions



of Egypt must allow that none can be better in any part of the globe. There, he says, they are sweet, though in many countries they are strong and nauseous. There they are soft, whereas in northern countries, they are hard, and their coats so compact, that they are difficult to digest. This very quality may, however, recommend them in countries where food is scarce. The Doctor observes, that the Turks eat them roasted with their meat as we do bread, and are so fond of them that they wish to be indulged with this dish in Paradise.

From the Doctor's account one would be induced to believe that the onion used in Egypt was of a different species from ours; but I am rather inclined to think it may depend on the mode of culture, as well as on the warmth of the climate and the difference of soil, as we find in the southern parts of Europe they are milder than in the more northerly. In Spain they are very mild, and a root weighing two pounds will grow from a single seed.

Onions are dressed in a variety of ways, but, in regard to wholesomeness, there is no method better than simple boiling. By this method of cooking they are rendered mild, of easy digestion, and go off without leaving any disagreeable heat on the stomach or bowels. Many shun them on account of the strong disagreeable smell they communicate to the breath. Mr. Bryant says, this may be remedied, by eating a few raw parsley leaves a short time after, which will effectually overcome the scent of the onions, and likewise cause them to sit more easy on the stomach.

The leek is generally reckoned among pot-herbs; but as the root is the part chiefly used, the consideration of it comes under the present head of discussion. Indeed it is properly a root as the onion, which grows chiefly above ground. The leek, as well as the onion, is said to be a constant dish at the table of the Egyptians, who chop them small, and eat them with their meat.

The leek is used as a pot-herb in most parts of Britain, especially in Wales, where the natives are said to be fond of it. In Scotland a full grown fowl and small piece of salt beef, stewed with a large quantity of leeks,

is a very favorite dish. In my opinion the leek is not so generally used any where as it deserves to be.— There is no ingredient that goes into soup that is more wholesome, or that gives it a better flavor, than leeks. They are in many respects medicinal, and, to my taste, as an ingredient in soups they are greatly superior to the onion or any other pot-herb whatever.

[“All the varieties of the radish have a pungent and acrid taste, in consequence of a particular stimulating matter, which resides in the cortical part of the root. They may be said to contain little else than water, woody fibre, and acrid matter, and cannot, therefore, be very nutritive.”]

“Some herbs are still eaten in a raw state, but they are far less digestible than when cooked. During the heats of summer they are refreshing, and are well calculated to assuage that febrile state which full meals of animal food are known to occasion. Of all these herbs, the water-cress is the most beneficial; for, by operating in some degree as an aromatic, it promotes digestion, and corrects that tendency to flatulency which other raw vegetables are apt to produce. Cucumbers are by far the most unwholesome of all raw vegetables, and should be avoided as a poison, especially by dyspeptics. The lettuce is generally eaten in the form of a salad, dressed with oil and vinegar, which is the best mode of preparing it. Those, however, who eat it for the purpose of obtaining its narcotic influence, should eat it without vinegar, as that acid destroys the narcotic principle, which it naturally possesses in an eminent degree.”]

It is a fact worthy of observation, that the boiling of vegetable substances thoroughly, extricates a considerable quantity of air, and makes them less liable to produce flatulency.

I could mention many more esculent plants, which might occasionally supply the place of bread, but the above specimen is sufficient to show how liberal nature is in supplying man with food, provided he will take the trouble of cultivating and cooking it. Mr. Byrant, in his history of esculent plants enumerates above four

hundred and fifty, each of which affords a wholesome nourishment, and may occasionally be used in the place of bread.

*Broths and Soups.*—These may likewise be considered as substitutes for bread. If properly made, they will serve both for bread and drink. Though both is a dish of the greatest quantity, and may be considered as extremely delicious, yet it is not a favorite in this country. Here the people are fond of what they call solids; yet those very solids, they make into broth, by swallowing as much drink after them as they can get.

This kind of diet not only saves bread but drink.—The laborer who lives on hasty-pudding and soups, seldom has occasion for drink; while he who is burnt up with dry bread and cheese, or salt meat boiled, has a continual thirst, and spends the greater part of his earnings in liquor. This, by acting as a powerful stimulus, may make him do more work for some time, but generally cuts him off in the middle of his days. The laborer, who works hard and drinks hard, seldom lives long, and is an old man when he should be in his prime.

The roasting of meat is a wasteful mode of cookery, which ought to be avoided, as much of the substance, and the most nutritive parts, are lost by scorching and what flies off by evaporation.

Broth is not only a dish of great antiquity, but one that can be made in a great variety of ways. It receives into its composition animal and vegetable substances of every kind that are used in diet, and it may be seasoned so as to suit the palate. Indeed people early accustomed to eat broths properly made, are generally fond of them for their whole lives.

What parents love themselves, they generally give to their children, without any regard to its being proper for them or not. I have seen a father, who was fond of strong beer, make his son, an infant, guzzle it at every meal; and the mother, who delights in tea, does not fail to give it to her daughter whenever she takes it herself. By this conduct the son becomes a tippler, and the



daughter sips tea in the place of solid food, until she is eaten up with vapors and other nervous disorders.

Count Rumford says, brown soup is the common breakfast of the Bavarian peasants, to which they occasionally add bread. This he avers is infinitely preferable in all respects to that pernicious wash, tea, with which the lower classes of the inhabitants of this island drench their stomachs, and ruin their constitutions. He adds, that a simple infusion of this drug, drank boiling hot, as the poor generally drink it, is certainly a poison, which though it be sometimes slow in its operation, never fails to produce fatal effects even in the strongest constitution, where the free use of it is continued for a considerable length of time.

The German on his *polenta*, the American on his *mush*, and the North Briton on his *hasty-pudding*, can make a hearty breakfast for a tenth part of what a tea-breakfast would cost, while it is infinitely more wholesome. It has likewise the advantage that no bread is necessary.

The celebrated Dr. Hufiland, in his *Art of prolonging Life*, says, the moderate use of soups is certainly not hurtful; and it is singular that people should imagine it tends too much to relax the stomach. Does not all our drink, even though cold, become in a few minutes a kind of warm soup in the stomach: and does not the stomach retain the same temperature during the whole day? Be careful only not to use it hot, in too great quantity at one time, or too watery. It is attended even with great advantages. It supplies the place of drink, particularly to men of letters, women, and all those who do not drink, or drink very little except at table, and who, when they give over soup, receive in their blood too little moisture. And here it is to be remarked, that fluids used in the form of soups unite much better and sooner with our juices than when drank cold and raw. On this account soup is a great preventative of dryness and rigidity in the body, and therefore, the best nourishment for old people, and those who are of an arid temperament. It even supplies the place of medicine. After catching cold, in nervous

head-aches, colics, and different kinds of cramp in the stomach, warm soup is of excellent service. It may serve as a proof of the utility, or at least harmlessness of soup, when I remark that our forefathers, who certainly had more strength than we have, used soup; and that it is used by rustics, who are still stronger than those in refined life; and that all the old people with whom I ever was acquainted were great friends to it.

*Remarks.*—Although the place of bread may be occasionally supplied by farinacious roots and other vegetables, yet we would by no means wish to discourage the culture of grain. The culture of grain is the culture of men. While the husbandman is raising food for his fellow-creatures, he is laying the foundation of health and longevity to himself and his offspring. Innumerable benefits are connected with the culture of grain. While the artificer is sitting in some awkward posture, breathing confined, and, perhaps, contaminated air, the cultivator of the soil rises with the sun, eats his wholesome meal of milk and farinaceous food, hies him to the field, where he spends the day in useful labor, inhales the fresh breezes, and at eve returns home with a keen appetite, to enjoy his simple repast and sound repose.

It has been said, as artificers can earn more money than those who cultivate the ground, that arts ought to be encouraged, and grain, if necessary, imported. No manufacture is equal to the manufacture of grain. It supplies food for man and beast, while the surplus, by being exported, enriches the nation. Nor is it subject to the uncertainty of other manufactures. They often depend on fashion or caprice, but the necessities of life will always find their pleasure somewhere.

*Food considered in a medical point of view.*—Under this point of consideration, the most remarkable distinction of foods is into those which are already assimilated with the animal nature, and into those that are not. Animal substances are generally of the first

kind, which, although not entirely similar, are nearly so to our nature. Of the second kind are vegetables, which, with much more difficulty are assimilated. But as the nourishment of all animals can be originally traced to the vegetable kingdom, it becomes evident that the principle of all nutrition exists in vegetables.

In the first edition of his *Materia Medica*, Dr. Cullen observes, that though there is, perhaps, no vegetable which does not afford nourishment to some species of animals or other, yet, with regard to mankind, a very considerable distinction is to be made. Those vegetables that are of a mild, bland, agreeable taste, are proper nourishment, while those of an acrid, bitter, and nauseous nature, are improper. We use, indeed, several acrid substances as food, but as spices or condiments, which answer the purpose of medicines, rather than any thing else, although, not unfrequently, acrid and bitter acrid vegetables are admitted as food. For instance, celery and endive are used in common food, though both are substances of considerable acrimony; but it must be observed, that when we use them, they are previously blanched, which almost totally destroys their acrimony. Garlic, for example, seldom in this country, enters our food; but in southern countries, where this plant grows more mild, it is frequently used. The plant which furnishes casada, which, in its recent state, is of a very poisonous and acrimonious nature, affords an instance of the necessity of preparing acrid substances, even in hot countries; and there are other plants, such as the wake robbin, which in their natural state, are so acrimonious that they cannot be swallowed with safety; yet when deprived of that acrimony by boiling, afford good nourishment.

[The kind of food most suitable for man, has afforded physiologists a fertile theme for discussion. By far the greatest number recommend a mixed diet; yet many names of respectability in science contend, from reason and observation, that it was originally intended that man should subsist on a purely vegetable regimen. A satisfactory solution of this question, however, may be drawn from various sources—as the structure and



character of his teeth, and the motion of his jaws ; being constructed for both tearing and grinding—the size and organization of his stomach and intestines ; being intermediate between those of carnivorous and herbivorous animals—his appetite ; which leads him to appropriate both kinds of food to his use—and by the effects produced on him by the different species of aliment ; it being a well known fact, that every nation has attained a high degree of mental and physical excellence, subsists on a mixed diet ; while those nations, which from climate or other causes, are compelled to live on animal or vegetable food alone, are inferior in stature, strength, and intellectual power to those who use both of them.

Some physiologists who contend for a mixed diet, are inclined to think that man is more herbivorous than carnivorous in his nature, and have gone so far as to conclude that his food should consist of animal and vegetable matter in proportion of twenty of the latter to twelve of the former. No rule, however, of this kind, can possibly be established—the circumstances of climate, season, exercise, habit, age, and individual peculiarity, must oppose any such attempt at generalization. In cold climates, he must ever consume a greater proportion of animal food, if he does not live almost exclusively on it ; while in tropical regions, from the very nature of things, a vegetable diet must predominate ; even if his appetite did not instinctively point to it as the most suitable for him under such circumstances.

It may be inferred, says Dr. Paris, that the ultimate effects of all aliments must be virtually the same, since every description of food, derived from the animal or vegetable kingdom, is converted into blood. The several species can only differ from each other in the quantity of nutriment they afford, in the degree of stimulus they impart to the organs through which they pass, and in the proportion of vital energy they require for their assimilation. A knowledge of these differences, however, is of great practical utility in the selection of diet, especially in cases of invalids and convalescents.

*Differences between Animal and Vegetable Food.*  
—Vegetable differs from animal food in many respects. 1st, It has a greater tendency to acidity ; whilst animal food of all kinds inclines more to alkalescency and putrefaction. 2d, With regard to their difference of solution in the stomach, heaviness, as it is called, is seldom felt from vegetables, except from tough farinaceous paste, or the most viscid substances ; while heaviness from animal food is more frequently noticed, especially when taken in any great quantity. 3d, With regard to mixture, there is no instance of difficult mixture in vegetables, except in vegetable oils ; while animal food, especially the fatter meats, both from viscosity and oiliness, are in this respect refractory. 4th, When the putrescency of animal food has proceeded so far, it produces an active stimulus, causing diarrhœa and dysentery. These effects are, however, but of rare occurrence ; whereas from vegetable food and its acid, which united with bile, proves a strong stimulus, they more frequently occur ; fortunately, however, they are of less consequence, if the degree of refrigeration be not very great. 5th, Wherever neither putrefaction nor acidity has gone to any great length, animal food keeps the belly more regular, &c. 6th, Vegetable food gives a greater proportion of succulent matter, and, when exsiccated by the stomach and intestines, is more apt to stagnate and produce costiveness, than stimulating animal food, which, before it reaches the large intestines, where stoppage is made, it has obtained a putrefactive tendency, and gives a proper stimulus ; thus, those who are costive from the use of vegetables, when they return to animal food, are considerably ameliorated in their natural bodily health. See "*Natural and Medical Dieteticon, or Practical Rules for eating and drinking, &c.* By J. S. Forsyth, &c., pp 63-7.

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#### THE GENERAL CAUSE OF DISEASES.

The better to trace disease from their general causes, we shall take a view of the course or treatment of man-

kind in the state of infancy. In this period of our lives the foundations of a good or bad constitution are generally laid ; it is, therefore, of importance, that parents be well acquainted with the various causes which may injure the health of their offspring.

It appears from the annual registers of the dead, that almost one-half of the children born in some countries at least, die under twelve years of age. To many, indeed, this may be a natural evil ; but, on due examination, it will be found one of our own creating. Were the death of infants a natural evil, other animals would be as liable to die young as man ; but this we find is by no means the case.

It may seem strange that man, notwithstanding his superior reason, should fall so far short of other animals in the management of his young. But our surprise will soon cease, if we consider that brutes, guided by instinct, never err in this respect ; while man, trusting solely to art, is seldom right. Were a catalogue of those infants who perish annually by art alone, exhibited to public view it would astonish most people.

Nothing can be more preposterous than a mother who thinks it below her to take care of her own child, or who is so ignorant as not to know what is proper to be done for it. If we search Nature throughout, we cannot find a parallel to this. Every other animal is the nurse of its own offspring, and they thrive accordingly.

Were the brutes to bring up their young by proxy, they would share the same fate with those of the human species.

We mean not, however, to impose it as a task upon every mother to suckle her own child. Women of delicate constitutions, subject to hysteric fits, or other nervous affections, make very bad nurses : and these complaints are now so common, that it is rare to find a woman of fashion free from them. Such women, therefore, supposing them willing, are really unable to suckle their own children.

Almost every mother would be in a condition to give suck, did mankind live agreeably to nature. But who-

ever considers how far mothers often deviate from their dictates, will not be surprised to find some of them unable to perform that necessary office. Mothers who do not eat a sufficient quantity of solid food, or enjoy the benefit of free air and exercise, can neither have wholesale humors themselves, or afford proper nourishment to an infant. Hence, children, who are suckled by delicate women, either die young, or are weak and sickly all their lives.

After all, to the credit of the American ladies, be it said, that few of them abandon their children to the care of servants as nurses, but delight themselves with the care of their offspring. Our ladies in the general have not become so degenerate as Tacitus tells us the Roman ladies were in his time. But he says in former times the greatest women in Rome used to account it their chief glory to keep the house and attend to their children.

If mothers were to reflect on their own importance, and lay it to heart, they would embrace every opportunity of informing themselves of the duties which they owe to their infant offspring. It is their province not only to form the body, but also to give the mind its most early bias. They have it very much in their power to make men healthy or valetudinary—useful in life or the pests of society. But the mother is not the only person concerned in the management of children. The father has an equal interest in their welfare, and ought to assist in every thing that respects either the improvement of the body or mind.

It is a pity that the men should be so inattentive to this matter. Their negligence is one reason why females know so little of it. Nor have physicians themselves been sufficiently attentive to the management of children. That has generally been considered as the sole province of old women, while men of the first character in physic have refused to visit infants, even when sick. Such conduct in the faculty has not only caused this branch of medicine to be neglected, but has also encouraged the other sex to assume an absolute title to prescribe for children in the most dangerous diseases. The conse-



quence is, that a physician is seldom called till the good women have exhausted all their skill, when his attendance can only serve to divide the blame and appease the disconsolate parents.

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## DISEASED PARENTS.

One great source of the diseases of children is, the *unhealthiness of parents*. It would be as unreasonable to expect a rich crop from a barren soil, as that strong and healthy children should be born of parents whose constitutions have been worn out with intemperance or disease.

An ingenious writer observes, (Rosseau,) that on the constitution of mothers depends originally that of their offspring. No one who believes this will be surprised, on a view of the female world, to find disease and death so frequent among the children. A delicate female, brought up within doors, an utter stranger to exercise and open air, who lives on tea and other slops, may bring a child into the world, but it will be hardly fit to live. The first blast of disease will nip the tender plant in the bud: or, should it struggle through a few years existence, its feeble frame shaken with convulsions from every trivial cause, will be unable to perform the common functions of life, and prove a burden to society.

If to the delicacy of mothers we add the irregular lives of fathers, we shall see further cause to believe that children are often hurt by the constitution of their parents. A sickly frame may be originally induced by hardships or intemperance, but chiefly by the latter. It is impossible that a course of vice should not spoil the best constitution. And did the evil terminate here, it would be a just punishment for the folly of the sufferer; but when once a disease is contracted and united in the habit, it is entailed on posterity.

What a dreadful inheritance is the gout, the scurvy, or the king's evil, to transmit to our offspring!

Such children as have the misfortune to be born of

diseased parents, will require to be nursed with greater care than others. This is the only way to make amends for the defects of constitution; and it will often go a great length. A healthy nurse, wholesome air, and sufficient exercise, will do wonders. But when these are neglected, little is to be expected from any other quarter. The defects of constitution cannot be supplied by medicine.

Those who inherit any family disease ought to be very circumspect in their manner of living. They should consider well the nature of such disease and guard against it by a proper regimen. It is certain, that family diseases have often, by proper care, been kept off for one generation; and there is reason to believe, that by persisting in the same course, such diseases might at length be wholly eradicated. This is a subject very little regarded, though of the greatest importance. Family constitutions are as capable of improvement as family estates; and the libertine, who impairs the one, does greater injury to his posterity than the prodigal, who squanders away the other.

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### THE CLOTHING OF CHILDREN.

The clothing of an infant is so simple a matter, that it is surprising how any person should err in it; yet how many children lose their lives, and others are deformed, by inattention to this article.

Nature knows no use of clothing to an infant, but to be kept warm. All that is necessary for this purpose is to wrap it in a soft, loose covering. Were a mother left to the dictates of Nature alone, she would certainly follow this method. But the business of dressing an infant has long been out of the hands of mothers, and has at last become a secret which none but adepts pretend to understand.

From the most early ages it has been thought necessary that a woman in labor should have some person to attend her. This, in time, became a business; and, as in all others, those who were employed in it strove to



outdo one another in the different branches of their profession.

The dressing of a child came of course to be considered as the midwife's province, who, no doubt, imagined, that the more dexterity she should show in this matter, the more her skill would be admired. Her attempts were seconded by the vanity of parents, who, too often desirous of making a show of the infant as soon as it was born, were ambitious to have as much finery heaped upon it as possible. Thus it came to be thought as necessary for a midwife to excel in bracing and dressing an infant, as for a surgeon to be expert in applying bandages to a broken limb ; and the poor child, as soon as it came into the world, had as many rollers and wrappers applied to its body, as if every bone had been fractured in the birth ; while these were often so tight as not only to gall and wound its tender frame, but even to obstruct the motion of the heart, lungs, and other organs necessary for life.

In several parts of the world, the practice of rolling children with so many bandages is now, in some measure, laid aside ; but it would still be a difficult task to persuade the generality of mankind, that the shape of an infant does not entirely depend on the care of the midwife. So far, however, are all her endeavors to mend the shape from being successful, that they constantly operate the contrary way, and mankind become deformed just in proportion to the means used to prevent it. How little deformity is to be found among uncivilized nations ? So little indeed, that it is vulgarly believed that they put all their deformed children to death. The truth is, they hardly know such a thing as a deformed child. Neither should we, if we followed their example. Savage nations never think of manacling their children. They allow them the full use of every organ, carry them abroad in the open air, wash their bodies daily in cold water. By this management children become so strong and hardy, that by the time our puny infants get out of the nurse's arms, theirs are able to shift for themselves.

Among brute animals no art is necessary to procure

a fine shape. Though many of them are extremely delicate when they come into the world, yet we never find them grow crooked for the want of swaddling bands. Is nature less generous to the human kind? No : But we take the business out of Nature's hand.

Not only the analogy of other animals, but the very feelings of infants, tells us they ought to be kept easy and free from all pressure. They cannot, indeed, tell their complaints, but they can show signs of pain ; and this they never fail to do, by crying when pinched by their clothes. No sooner are they freed from their bracings than they seemed pleased and happy ; the moment they hold their peace, they are again committed to their chains.

If we consider the body of an infant as a bundle of soft pipes, replenished with fluids in continual motion, the danger of pressure will appear in the strongest light. Nature, in order to make way for the growth of children, has formed their bodies soft and flexible ; and lest they should receive any injury from the womb, has surrounded the fœtus every where with fluids. This shows the care which Nature takes to prevent all unequal pressure on the bodies of infants, and to defend them against every thing that might in the least cramp or confine their motions.

Even the bones of an infant are soft and cartilaginous, that they readily yield to the slightest pressure, and easily assume a bad shape, which can never after be remedied. Hence, it is, that so many people appear with high shoulders, crooked spines, and flat breasts, who were as well proportioned at their birth as others, but had the misfortune to be squeezed out of shape by the application of stays and bandages.

Pressure, by obstructing the circulation, likewise prevents the equal distribution of nourishment to the different parts of the body, by which means the growth becomes unequal. One part grows too large, while another remains too small ; and thus, in time, the whole frame becomes disproportioned and misshapen. To this we must add, that when a child is cramped in its clothes it naturally shrinks from the part that is hurt ;

and by putting its body into unnatural postures, it becomes deformed by habit.

Deformity of body may, indeed, proceed from weakness or disease ; but in general, it is the effect of improper clothing. Nine-tenths, at least, of the deformity of mankind must be imputed to this cause. A deformed body is not only disagreeable to the eye, but by a bad figure, both the animal and vital functions must be impeded, and of course health impaired. Hence few people remarkably misshapen are strong or healthy.

The new motions which commence at the birth, as the circulation of the whole mass of blood through the lungs, respiration, the peristaltic motion, &c., afford another strong argument for keeping the body of an infant free from all pressure. These organs, not having been accustomed to move, are easily stopped ; but when this happens, death must ensue. Hardly any method could be devised more effectually to stop this motion than bracing the body too tight with rollers and bandages. Were these to be applied in the same manner to the body of an adult for an equal length of time, they could hardly fail to hurt digestion, and make him sick. How much more hurtful they must prove to the tender bodies of infants, we shall leave any one to judge. Whoever considers these things will not be surprised, that so many children die of convulsions soon after the birth. These fits are generally attributed to some inward cause ; but in fact, they oftener proceed from our own imprudent conduct. I have known a child seized with convulsion fits after the midwife had done swaddling it, who, upon taking off the rollers and bandages was immediately relieved, and never had the disease afterwards. Numerous examples of this might be given were they necessary.

It would be safer to fix on the clothes of an infant with strings than pins, as these often gall and irritate their tender skins, and occasion disorders. Pins have been found sticking above half an inch into the body of a child, after it had died of convulsion-fits, which, in all probability, proceeded from that cause.

Children are not only hurt by the tightness of their

clothes, but also by the quantity. Every child has some degree of fever after the birth ; and if it be loaded with too many clothes, the fever must be increased. But that is not all ; the child is generally laid in bed with the mother, who is likewise feverish : to which we may add the heat of the bed, bed-chamber, the wines, and other heating things, too frequently given to children immediately after the birth. When all these are combined, which seldom does not happen, they must increase the fever to such a degree as will endanger the life of the infant.

The danger of keeping infants too hot will further appear, if we consider that, after they have been for sometime in the situation mentioned above, they are often sent into the country to be nursed in a cold house. Is it any wonder if a child, from such a transition, catches a mortal cold, or contracts some other fatal disease ? When an infant is kept too warm, its lungs not being sufficiently expanded, are apt to remain weak and placid for life ; hence proceed coughs, consumptions, and other diseases of the breast.

It would answer little purpose to specify the particular pieces of dress proper for an infant. These will always vary in different places according to custom, and the fancy of parents. The great rule to be observed is, that a child have no more cloths than are necessary to to keep it warm, and that they be quite easy for its body.

We shall only add, with respect to the clothes of children, that they ought to be kept thoroughly clean ; children perspire more than adults, and if their clothes be not frequently changed they become very hurtful.

Dirty clothes not only gall and fret the tender skins of infants, but likewise occasion ill smells, and what is worse, tend to produce vermin and cutaneous diseases. Cleanliness is not only agreeable to the eye, but tends greatly to preserve the health of children. It promotes the perspiration, and by that means, frees the body from superfluous humors, which, if retained, would not fail to occasion diseases. No mother or nurse can have any excuse for allowing a child to be dirty. Poverty may



oblige her to give it coarse clothes; but if she does not keep them clean it must be her own fault.

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### THE FOOD OF CHILDREN.

Nature not only points out the food proper for an infant, but actually prepares it. This, however, is not sufficient to prevent some who think themselves wiser than nature, from attempting to bring up their children without her provision. Nothing can show the disposition which mankind have to depart from Nature, more than their endeavoring to bring up their children without the breast. The mother's milk, or that of a healthy nurse, is unquestionably the best food for an infant. Neither art nor nature can afford a proper substitute for it.—Children may seem to thrive for a few months without the breast; but, when teething, the small-pox, and other diseases incident to childhood come on, they generally perish. A child, soon after the birth, shows a inclination to suck; and there is no reason why it should not be gratified. It is true, the mother's milk does not always come immediately after the birth; but this is the way to bring it. Besides, the first milk that the child can squeeze out of the breast answers the purpose of cleansing better than all the drugs in the Apothecary's shop, and at the same time prevents inflammations of the breast, fevers, and other diseases incident to mothers.—It is strange how people come to think that the first thing to be given to a child should be drugs. This is the beginning with medicine by times, and no wonder that they generally end with it. It sometimes happens, indeed, that a child does not discharge the meconium so soon as could be wished; this has induced physicians, in such cases, to give something of an opening nature to cleanse the first passages. Midwives have improved upon this hint, and never fail to give syrups, oils, &c. whether they be necessary or not. Cramming an infant with such indigestible stuff, as soon as it is born, can hardly fail to make it sick, and is more likely to occasion diseases than to prevent them. Children are seldom long

after the birth without having a passage, both by stool and urine; though these evacuations may be wanting for some time without any danger. But if children must have something before they be allowed the breast, let it be a little thin water-pap, to which may be added an equal quantity of new milk, or rather water alone, with the addition of a little sugar. If this be given without any wines or spices, it will neither heat the blood, load the stomach, or occasion gripes.

Upon the first sight of an infant, almost every person is struck with the idea of its being weak, feeble, and wanting support. This naturally suggests the need of cordials. Accordingly wines are universally mixed with the first food of children. Nothing can be more fallacious than this way of reasoning, or more hurtful to infants than the conduct founded upon it. Children need very little for some time after the birth, and what they receive should be thin, weak, light, and of a cooling quality. A very small quantity of wine is sufficient to heat and inflame the blood of an infant; but every person conversant in these matters must know, that most of the diseases of infants proceed from the *heat of their humors*.

If the mother or nurse has milk enough, the child will need little or no other food before the third or fourth month. It will then be proper to give it, once or twice a day, a little of some food that is easy of digestion, as water-pap, milk-pottage, weak broth, with bread in it, and such like. This will ease the mother, will accustom the child by degrees to take food, and will render the weaning both less difficult and less dangerous. All great and sudden transitions, are to be avoided in nursing. For this purpose the food of children ought not only to be simple, but to resemble, as nearly as possible, the properties of milk. Indeed milk itself should make a principal part of their food, not only before they are weaned, but for a long time after. Next to milk we would recommend good light bread. Bread may be given to a child as soon as it shows an inclination to chew; and it may at all times be allowed as much plain bread as it will eat. The very chewing of bread will

promote the cutting of teeth, and the discharge of saliva, while, by mixing with the nurse's milk in the stomach, it will afford an excellent nourishment. Children discover an early inclination to chew whatever is put into their hands.

Parents observe the inclination, but generally mistake the object. Instead of giving the child something which may at once exercise its gums and afford it nourishment, they commonly put into its hands a piece of hard metal, or impenetrable coral. A crust of bread is the best gumstick. It not only answers the purpose better than any thing else, but has the additional properties of nourishing the child and carrying the saliva down to the stomach, which is too valuable a liquor to be lost.

Bread, besides being used dry, may be many ways prepared into food for a child. One of the best methods is to boil it in water, afterwards pouring the water off, and mixing with the bread a proper quantity of new milk unboiled. Milk is both more wholesome and nourishing this way than boiled, and is less apt to occasion costiveness. For a child further advanced, bread may be mixed with chicken broth, or veal broth, or the like. Bread is a proper food for children at all times, provided it be plain, made of wholesome grain and well fermented, but when enriched with sugars, or such things, it becomes very unwholesome. It is soon enough to allow children animal food when they have got teeth to eat it. They should never taste it until after they are weaned, and even then they ought to use it sparingly. Indeed when children live wholly on vegetable food, it is apt to sour their stomach; but, on the other hand, too much flesh heats the blood, and occasions fevers, and other inflammatory diseases. This plainly points out a due mixture of animal and vegetable food as most proper for children. Few things are more hurtful to infants than the common method of sweetening their food. It entices them to take more than they ought to do, which makes them grow fat and bloated. It is pretty certain, if the food of children were quite plain, they would never eat more than enough. If a child be gorged with food at all hours, and enticed to take it, by making it

sweet and agreeable to the palate, is it any wonder that such a child should in time be induced to crave more food than it ought to have?

Children may be hurt by too little as well as too much food. After a child is weaned, it ought to be fed four or five times a day; but should never be accustomed to eat in the night; neither should it have too much at a time. Children thrive best with small quantities of food frequently given. This neither loads the stomach nor hurts the digestion, and is certainly most agreeable to nature.

Many people imagine, that the food which they themselves love cannot be bad for their children; but this is very absurd. In the more advanced periods of life we often acquire an inclination for food, which when children we could not endure. Besides, there are many things that by habit may agree very well with the stomach of a grown person, which would be hurtful to a child, as high-seasoned, salted, and smoke-dried provisions, &c. It would also be improper to feed children with fat meat, strong broths, or the like.

All strong drinks are hurtful to children. Some parents teach their children to drink their dram or morning bitters; such a practice cannot fail to do mischief. Those children seldom escape the violence of the measles, hooping-cough, or some inflammatory disorder.

Milk, water, butter-milk, or whey, are the most proper for children to drink. If they have any thing stronger it may be a little wine with water. The stomachs of children can digest well enough without the assistance of warm stimulants. Besides, being naturally hot, they are easily hurt by every thing of a heating quality.

Few things are more hurtful to children than unripe fruits. They weaken the powers of digestion, and sour and relax the stomach, by which means it becomes a proper nest for insects. Children indeed show a great inclination for fruits, and I am apt to believe, that if good ripe fruit were allowed them in a proper quantity, it would have no bad effects. We never find a natural inclination wrong, if properly regulated.

Fruits are generally of a cooling nature, and correct



the heat and acrimony of the humors. This is what most children want; only care should be taken that they do not eat too much. Indeed the best way to prevent children from going to excess in the use of fruit, or eating that which is bad, is to allow them a proper quantity of what is good.

Butter ought likewise to be sparingly given to children. It both relaxes the stomach and produces gross humors. Indeed most things that are fat or oily, have this effect. Butter, when salted, becomes still more hurtful. Instead of butter, so liberally given to children in most parts of our country, we would recommend honey.—Honey is not only wholesome, but cooling, cleansing, and tends to sweeten the humors. Children who eat honey are seldom troubled with worms. They are less subject to cutaneous diseases, as itch, scabbed-head, &c. Many people err in thinking, that the diet of children ought to be altogether moist. When children live entirely upon slops, it relaxes their solids, renders them weak, and disposes them to the rickets, the scrofula, and other glandular diseases of children. Every thing, therefore, which tends to unbrace their solids, ought to be carefully avoided.

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### THE EXERCISE OF CHILDREN.

Of all the causes which conspire to render the life of man short and miserable, none has greater influence than the want of proper exercise. Healthy parents, wholesome food, and proper clothing, will avail little where exercise is neglected. Sufficient exercise will make up for several defects in nursing, but nothing can supply the want of it. It is absolutely necessary to the health, the growth, and the strength of children.

The desire of exercise is coeval with life itself. Were this principle attended to, many diseases might be prevented. But, while indolence and sedentary employments prevent two-thirds of mankind from either taking sufficient exercise themselves, or giving it to their children, what have we to expect but disease and deformi-

ty among their offspring? The rickets, so destructive to children, we are told, never appeared in Britain till manufactories began to flourish; and people, attracted by the love of gain, left the country to follow sedentary employments in great towns. It is among these people that this disease chiefly prevails, and not only deforms, but kills many of their offspring.

The conduct of other young animals shows the propriety of giving exercise to children. Every other animal makes use of its organs of motion as soon as it can, and many of them, even when under no necessity of moving in quest of food, cannot be restrained without force. This is evidently the case with the calf, the lamb, and most other young animals. If these creatures were not permitted to frisk about and take exercise, they would soon die or become diseased. The same inclination appears very early in the human species; but as they are not able to take exercise themselves, it is the business of their parents and nurses to assist them.

Children may be exercised various ways. The best method, while they are light, is to carry them about in the nurse's arms, (the nurse taking care to keep the child in a proper position.) This gives the nurse an opportunity of talking to the child, and of pointing out every thing that may please and delight its fancy. Besides, it is much safer than swinging an infant in a machine, or leaving it to the care of such as are not fit to take care of themselves. Nothing can be more ridiculous than to set one child to keep another. This conduct has proved fatal to many infants, and has rendered others miserable for life.

When children begin to walk, the safest and best method of leading about, is by the hands. It is a common notion, that if children be set upon their feet too soon, their legs will become crooked. There is reason to believe, that the very reverse of this is true. Every member acquires strength in proportion as it is exercised. The limbs of children are weak indeed, but their bodies are proportionably light; and had they skill to direct themselves, they would soon be able to support their own weight. Whoever heard of any other animal

that became crooked by using its legs too soon. Indeed, if a child be not permitted to make any use of its legs till a considerable time after the birth, and be then set upon them with its whole weight at once, there may be some danger; but this proceeds entirely from the child's not having been accustomed to use its legs from the beginning.

Whoever considers the structure of the human body, will soon be convinced of the necessity of exercise for the health of children. The body is composed of an infinite number of vessels, whose fluids cannot be pushed on without the action and pressure of the vessels. But, if the fluids remain inactive, obstructions must happen, and the humors will of course be vitiated, which cannot fail to occasion diseases. Nature has furnished both the vessels which carry the blood and lymph with numerous valves, in order that the action of every muscle might push forward their contents; but, without action, this admirable contrivance can have no effect. This part of the animal economy proves to a demonstration the necessity of exercise for the preservation of health. Arguments to show the importance of exercise might be drawn from every part of the animal economy.

Without exercise the circulation of the blood cannot be properly carried on, nor the different secretions duly performed; without exercise the humors cannot be properly prepared, nor the solids rendered strong or firm.—The action of the heart, the motion of the lungs, and all the vital functions, are greatly assisted by exercise.—But to point out the manner in which these effects are produced, would lead us further into the economy of the human body, than those for whom this treatise is intended would be able to follow. We shall only add, that where exercise is neglected, none of the animal functions can be duly performed; and when that is the case the whole constitution must go to wreck.

A good constitution ought certainly to be our first object in the management of children. It lays a foundation for their being useful and happy in life; and whoever neglects it, not only fails in his duty to his offspring, but to society.



An effeminate education will infallibly spoil the best natural constitution; and if boys are brought up in a more delicate manner than even girls ought to be, they never will be men. Nor is the common education of girls less hurtful to the constitution, than that of boys. Would mothers, instead of having their daughters instructed in many trifling accomplishments, employ them in plain work and housewifery, and allow them sufficient exercise in the open air, they would both make them more healthy mothers, and more useful members of society. I am no enemy to genteel accomplishments, but would have them only considered as secondary, and always disregarded when they impair health. There are, nevertheless, various ways of employing young people without hurting their health. The easier parts of gardening, or any business carried on without doors, are most proper. These are employments which most young people are fond of, and some parts of them may always be adapted to their age, taste and strength.

Such parents, however, as are under the necessity of employing their children within doors, ought to allow them sufficient time for active diversions. This would both encourage them to do more work, and prevent their constitutions from being hurt.

Some imagine that exercise within doors is sufficient; but they are greatly mistaken. One hour spent in running, or any other exercise without doors, is worth ten within. When children cannot go abroad, they may indeed be exercised at home. The best method of doing this is to make them run about in a long room, or dance. This last kind of exercise, if not carried to excess, is of excellent service to young people. It cheers the spirits, promotes perspiration, strengthens the limbs, &c. I have been told of an eminent physician who used to say, that he made his children dance instead of giving them physic.

The cold bath may be considered as an aid to exercise. By it the body is braced and strengthened, the circulation and secretions promoted, and, were it conducted with prudence, many diseases, as the rickets, scrofula, &c., might thereby be prevented. The an-



cients, who took every method to render children hardy and robust, were strangers to the use of the cold bath. We ought not to set aside the cold bath, because some nurses and others make a wrong use of it. Every child, when in health, should at least have its extremities daily washed in cold water. This is a partial use of the cold bath, and is better than none. In winter this may suffice, but, in the warm season, if a child be relaxed, or seem to have a tendency to the rickets, or scrofula, its whole body ought to be frequently immersed in cold water. Care, however, must be taken not to do this when the body is warm or full. The child should be dipped only once at a time, should be taken out immediately and have its skin rubbed with a dry cloth.

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#### THE BAD EFFECTS OF UNWHOLESOME AIR UPON CHILDREN.

Few things prove more destructive to children than confined or unwholesome air. Want of wholesome air is likewise destructive to many of the children born in great towns. There the poorer sort of inhabitants live in low, dirty, confined houses, to which the fresh air has no access. Though grown people, who are hardy and robust, may live in such situations, yet they generally prove fatal to their offspring, few of whom arrive at maturity, and those who do are weak and deformed. As such people are not in a condition to carry their children abroad into the open air, we must lay our account with losing the greater part of them.

But the rich have not this excuse. It is their business to see that their children be daily carried abroad, and that they be kept in the open air for a sufficient time.—This will always succeed better if the mother goes along with them. Servants are often negligent in these matters, and allow a child to sit or lie on the damp ground, instead of leading or carrying it about. The mother surely needs air as well as her children; and how can she be better employed than in attending them? A very bad custom prevails in making children sleep in small

apartments, or crowding two or three beds in one chamber. Instead of this the nursery ought always to be the largest and best aired room in the house. When children are confined in small apartments, the air not only becomes unwholesome, but the heat relaxes their solids, renders them delicate, and disposes them to colds and other disorders. Nor is the custom of wrapping them up too close in cradles less pernicious. One would think that nurses were afraid lest children should suffer by breathing free air, as many of them actually cover the child's face while asleep, and others wrap a covering over the whole cradle, by which means the child is forced to breathe the same air over and over all the time it sleeps. Cradles indeed are on many accounts hurtful to children, and it would be better if the use of them were totally laid aside.

A child is generally laid to sleep with all its clothes on, and if a number of others are heaped above them, it must be over-heated, by which means it cannot fail to catch cold on being taken out of the cradle and exposed to the open air with only its usual clothing, which is too frequently the case. Children who are kept within doors all day, and sleep all night in warm, close apartments, may, with great propriety, be compared to plants, nursed in a hot-house, instead of the open air. Though such plants may by this means be kept alive for some time, they will never arrive at that degree of strength, vigor, and magnitude, which they would have acquired in the open air, nor would they be enabled to bear it afterwards should they be exposed to it.

Without entering into a detail of the advantages of wholesome air to children, or of the bad consequences which proceed from the want of it, I may give in evidence the testimony of a physician of great eminence, and whom I had the honor of becoming acquainted with in Dublin when I visited that city after the last war; he assured me that of the several thousands of children which have been under his care he did not remember one instance of a single child who continued healthy in a close, confined situation; but have known

the most obstinate diseases cured by removing them from such a situation to an open free air.

Allowing children to continue long wet, is another very pernicious custom of indolent nurses. This is not only disagreeable, but it galls and frets the infant, and by relaxing the solids, occasions scrofulas, rickets, and other diseases.

Nature often attempts to free the bodies of children from bad humors, by throwing them upon the skin. By this means fevers and other diseases are prevented.—Nurses are apt to mistake such critical eruptions for an itch, or some other infectious disorder. Accordingly they take every method to drive them in. In this way many children lose their lives; and no wonder, as nature is opposed in the very method she takes to relieve them. It ought to be a rule, which every mother should observe, never to stop any eruption without proper advice, or being well assured that it is not of a critical nature. At any rate, it is never to be done without previous evacuations.

Loose stools is another method by which Nature often prevents or carries off the diseases of infants. If these proceed too far, no doubt they ought to be checked; but this is never to be done without the greatest caution. Mothers, or nurses, upon the first appearance of loose stools, frequently fly to the use of astringents, or such things as bind the body. Hence inflammatory fevers and other fatal diseases, are occasioned. A dose of rhubarb, a gentle vomit, or some other evacuation, should always precede the use of astringent medicines.

No person ought to imagine these unworthy of his attention. On the proper management of children depend not only their health and usefulness in life, but likewise the safety and prosperity of the state to which they belong. Effeminacy even will prove the ruin of any state where it prevails; and when its foundations are laid in infancy, it can never afterwards be wholly eradicated. Parents who love their offspring, and wish well to their country, ought therefore, in the management of their children, to avoid every thing that may have a tendency to make them weak or effeminate, and

to take every method in their power to render their constitutions strong and hardy.

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### THE LABORIOUS, THE SEDENTARY, AND THE STUDIOUS.

That men are exposed to particular diseases from the occupations which they follow, is a fact well known ; but to remedy this evil, is a matter of some difficulty. Most people are under a necessity of following the employments to which they have been bred, whether they be favorable to health or not. For this reason instead of inveighing, in a general way, as some authors have done, against those occupations which are hurtful to health, we shall endeavor to point out the circumstances of each of them from which the danger chiefly arises, and to propose the most rational methods of preventing it.

Chemists, founders, glass-makers, and several other artists, are hurt by the unwholesome air which they are obliged to breathe. This air is not only loaded with the noxious exhalations arising from metals and minerals, but is so charged with the unwholesome properties of the air, as to be unfit for expanding the lungs sufficiently and answering the other important purposes of respiration. Hence proceeds asthmas, coughs, and consumptions of the lungs, so incident to persons who follow these employments.

To prevent such consequences as far as possible, the places where these occupations are carried on, ought to be constructed with the utmost care for discharging the smoke and other exhalations, and admitting a free current of fresh air. Such artists ought never to continue too long at work ; and when they leave off, they should suffer themselves to cool gradually, and put on their clothes before they go into the open air. They ought never to drink large drinks of cold water in haste.

Miners, and all who work under ground are likewise hurt by unwholesome air. The two kinds of air which prove most destructive to miners, are what is called the fire damp, and the choke damp; in both cases the air



becomes a poison. The danger from the former may be obtained by making it explode before it accumulates in too great quantities, and the latter may be generally carried off by promoting a free circulation of air in the room.

Miners are not only hurt by unwholesome air, but likewise by the particles of metal which adhere to their skin, clothes, &c. These are absorbed, or taken up into the body, and occasion palsies, vertigoes, and other nervous affections, which often prove fatal. It is observed, that those who work in mines of mercury, seldom live above three or four years. Lead and several other metals, are likewise very pernicious to health.

Plumbers, painters, gilders, smelters, makers of white lead, and many others who work in metals, are liable to the same diseases as miners, and ought to observe the same directions for avoiding them.

Tallow-chandlers, boilers of oil, and all who work in putrid animal substances, are likewise liable to suffer from the unwholesome smells or effluvia of these bodies. They ought to observe cleanliness.

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### THE LABORIOUS.

Though those who follow laborious employments are in general the most healthy of mankind, yet the nature of their occupations, and the places where they are carried on, expose them more particularly to some diseases. Husbandmen, for example, are exposed to all the vicissitudes of the weather, which, in this country, are very great and sudden, and occasions colds, coughs, quinsies, rheumatisms, fevers, and other acute disorders. They are likewise forced to work hard, and often to lift above their strength, which, by overstraining the vessels, occasions asthmas, ruptures, &c.

The Erysipelas, or St. Anthony's fire, is a disease very incident to the laborious. It is occasioned by whatever gives a sudden check to perspiration, as drinking cold water when the body is warm, wet feet, keeping on wet clothes, sitting or lying on the damp ground, &c.

The *iliac passion*, the cholic, and other complaints of the bowels, are often occasioned by the same causes as the Erysipelas ; but they may likewise proceed from flatulent and indigestible food.

Inflammations, whitloes, and other diseases of the extremities, are likewise common among those who labor without doors. These diseases are often attributed to venom, or some kind of poison ; but they generally proceed either from sudden heat after cold, or the contrary.

Laborers in the hot season are apt to lie down and sleep in the sun. This practice is so dangerous, that they often make a burning fever, or from the damp of the ground contract a stiffness of the limbs, and labor under rheumatism for months, and even longer. These ardent fevers, which prove so fatal about the end of summer and beginning of autumn, are frequently occasioned by this means.

The office of a soldier, in time of war, may be ranked among the laborious employments. Soldiers suffer many hardships from the inclemency of the seasons, long marches, bad provisions, hunger, watching, unwholesome climates, bad weather, &c. These occasion fevers, fluxes, rheumatisms, and other fatal diseases, which generally do greater execution than the sword, especially when campaigns are continued too late in the year. A few weeks of cold, rainy weather will often prove more fatal than an engagement.

Those who have the command of armies, should take care that their soldiers are well clothed and well fed.— They ought to finish their campaign in due season, and to provide their men with dry and well aired winter quarters.

These rules, taking care, at the same time, to keep the sick at a proper distance from those in health, would tend greatly to preserve the lives of the soldiery.

Sailors may also be numbered among the laborious. They undergo great hardships from change of climate, the violence of weather, hard labor, bad provisions, &c. Sailors are of so great importance both to the trade and safety of this country, that too much pains can never be

bestowed in pointing out the means of preserving their lives.

One great source of the diseases of sea-faring people is excess. When they get on shore, after having been long at sea, without regard to the climate or their own constitutions, they plunge headlong into all manner of riot, and often persist till a fever puts an end to their lives. Thus intemperance, and not the climate, is often the cause why so many of our brave sailors die, having scarcely passed the meridian of life.

Sailors, when on duty, cannot avoid sometimes getting wet. When this happens they should change their clothes as soon as they are relieved, and take every method to restore perspiration. They should not, in this case, have recourse to spirits, or other strong liquors, but should rather drink such as are weak and diluting, of a proper warmth, and go immediately to bed, when a sound sleep and a gentle sweat would set all to rights.

But the health of sailors suffers mostly from unwholesome food. The constant use of salted provisions vitiates their humors and occasions the scurvy, and other obstinate maladies. It is no easy matter to prevent this disease in long voyages; yet, as we cannot help thinking, that much might be done towards affecting so desirable an end, were due pains bestowed for that purpose. For example, various roots, and fruits, might be kept a long time at sea, as onions, potatoes, cabbages, lemons, oranges, tamarinds, apples, &c.; when fruits cannot be kept, the juices of them, either fresh or fermented, may; with these all the drink, and even the food, of the ship's company ought to be acidulated in long voyages.

*State* bread and beer likewise contribute to vitiate the humors. Meal will keep for a long time on board, of which fresh bread might frequently be made. Malt too, might be kept, and infused with boiling water at any time. This liquor, when drank even in the form of what is called malt, is very wholesome, and is found to be an antidote against the scurvy. Small wines and cider might likewise be plentifully laid in; and should they turn sour they would still be useful as vinegar—vinegar



is a great antidote against diseases, and should be used by all travellers, especially at sea. It may be mixed with the water they drink, or taken in their food.

There is a vegetable called scurvy-grass, it sometimes grows in abundance in the south. When I was surgeon and physician to the 7th United States' Infantry, which was removed from fifteen miles below New Orleans to the neighborhood of Natchez, in 1809, I found it of great service in the cure of scurvy, which had prevailed to an alarming extent. I had it collected and allowed the soldiers to eat it raw in large quantities.

Such animals as can be kept alive, ought likewise to be carried on board; as hens, pigs, ducks, &c. Fresh broths made of portable soup, and puddings made of peas or other vegetables, ought to be used plentifully. Many other things will readily occur to people conversant in these matters, which would tend to preserve the health of that brave and useful set of men.

**℞.** We have reason to believe, if due attention were paid to the diet, air, clothing, and, above all things, to the cleanliness of sea-faring people, they would be the most healthy set of men in the world, but when these are neglected the very reverse will happen. It is asserted, by a physician of great experience, that the best medical antidote that we can recommend to sailors or soldiers, on foreign coasts, especially when dampness prevails, is Peruvian Bark—this will often prevent fevers, and other fatal diseases; about a drachm of it may be chewed every day, or, if this should prove disagreeable an ounce of bark with half an ounce of orange peeling and two drachms of snake root coarsely powdered, may be infused for two or three days in a quart of brandy, or whiskey, and half a wine glass of it taken twice or thrice a day, when the stomach is empty. This has been found to be an excellent antidote against fluxes, putrid, intermittent, and other fevers, in unhealthy climates. It is not material in what form this medicine be taken. It may either be infused in water, wine, or spirits, as recommended above, or made into an electuary with syrup of lemons, oranges, or the like.

Though nothing can be more contrary to the nature



of man than sedentary life, yet this class comprehends the far greater part of the species. Almost the whole female world, and, in manufacturing countries, the major of the males may be reckoned sedentary.

Agriculture is the great source of domestic riches. Where it is neglected, whatever wealth may be imparted from abroad, poverty and misery will abound at home. Such is, and ever will be, that thousands of people may be in full employment to-day and to-morrow in beggary.

This can never happen to those who cultivate the ground. They can eat the fruit of their labor, and can always by industry obtain, at least, the necessaries of life.

Though sedentary employments are necessary, yet there seems to be no reason why any person should be confined for life to these alone. Where such employments intermixed with the more active and laborious, they never would do hurt. It is constant confinement that ruins the health. A man will not be hurt by sitting five or six hours a day, but if he be obliged to sit ten or twelve he will soon become delicate.

But it is not want of exercise alone that hurts sedentary people; they likewise suffer from confined air which they breathe. It is very common to see ten or a dozen tailors, or shoemakers, for example, crowded into one small apartment, where there is hardly room for one single person to breathe freely. In this situation they generally continue for many hours at a time, often with the addition of sundry candles, which tend likewise to waste the air, and render it less fit for respiration. Air that is breathed repeatedly loses its spring and becomes unfit for expanding the lungs. This is one cause of the phthysical coughs, and other complaints of the breast, so incident to sedentary artificers.

Even perspiration from a great number of persons pent up together, renders the air unwholesome. The danger from this quarter will be greatly increased if any one of them happens to have bad lungs, or be otherwise diseased. Those who sit near him, being forced to breathe the same air, can hardly fail to be infected.

It would be a rare thing, however, to find a dozen of sedentary people all in good health. The danger of crowding them together must therefore be evident to every one.

Many of those who follow sedentary employments are constantly in a bending posture, as shoemakers, tailors, cutlers, &c. Such a situation is extremely hurtful. A bending posture obstructs all the vital motions, and of course must destroy the health. Accordingly we find such artificers generally complaining of indigestions, flatulencies, headaches, pains of the breast, &c.

The aliment in sedentary people, instead of being pushed forward by an erect posture, and the action of the muscles, is in a manner confined in the bowels.—Hence indigestions, costiveness, wind, and other hypochondrical affections, the constant companions of the sedentary, indeed none of the excretions can be duly performed where exercise is wanting; and when the matter which ought to be discharged in this way is retained too long in the body, it must have bad effects, as it is again taken up into the mass of humors.

A bending posture is likewise hurtful to the lungs.—When this organ is compressed the air cannot have free access into all its parts, so as to expand them properly. Hence tubercles, adhesions, &c., are formed, which often end in consumptions. Besides, the proper action of the lungs being absolutely necessary for making good blood, when that organ fails the humors soon become universally depraved, and the whole constitution goes to wreck.

Sedentary artificers are not only hurt by pressure on the bowels, but also on the inferior extremities, which obstructs the circulation in these parts, and renders them weak and feeble. Thus tailors, shoemakers, &c., frequently lose the use of their legs altogether; besides, the blood and humors are, by stagnation, vitiated, and the perspiration is obstructed: from whence proceed the scab, ulcerous sores, foul blotches, and other cutaneous diseases so common to sedentary artificers.

A bad figure of body is a very common consequence of close application to sedentary employments. The

spine, for example, by being continually bent, puts on a crooked shape, and generally remains so ever after ; but a bad figure of body has already been observed to be hurtful to health as the vital functions are thereby impeded.

A sedentary life seldom fails to occasion a universal relaxation of the solids. This is the great source from whence most of the diseases of sedentary people flow. The scrofula, consumption, hysterics, and nervous diseases now so common, were very little known in this country some years ago, and they are very little known still among such as follow active employments without doors ; though in large towns, at least, two-thirds of the inhabitants are afflicted with them.

### THE STUDIOUS.

Intense thinking is said to be destructive to health and it seems to be a fact that there are few persons who are very studious that are strong and healthy.

So great is the power of mind over the body, that, by its influence, the whole vital motions may be accelerated or retarded to almost any degree. Thus cheerfulness and mirth give the circulation and promote all the secretions ; whereas, sadness and profound thought never fail to retard them.

Perpetual thinkers, as they are called, seldom think long. In a few years they generally become quite stupid and exhibit a melancholy proof how readily the greatest blessings may be abused.

Studious persons are very subject to the gout. This painful disease in a great measure proceeds from indigestion, and an obstructed perspiration.

The studious are likewise very subject to the stone and gravel. Exercise greatly promotes both the secretion and discharge of urine ; consequently a sedentary life must have the contrary effect.

The circulation in the liver being slow, obstructions in that organ can hardly fail to be the consequence of

inactivity. Hence sedentary people are frequently afflicted with scirrous or hard livers.

We shall only observe, with regard to those kinds of exercise which are most proper for the studious, that they should not be too violent, nor ever carried to the degree of excessive fatigue. They ought likewise to be frequently varied so as to give action to all the different parts of the body; and should, as often as possible, be taken in the open air. In general, riding on horse-back, walking, working in a garden, or playing at some active diversions, are the best.

We would likewise recommend the use of the cold bath to the studious. It will, in some measure supply the place of exercise, and should not be neglected by persons of a relaxed habit, especially in the warm season.

No person ought either to take violent exercise, or to study immediately after a full meal.



OF THE STRUCTURE  
OF  
THE HUMAN MACHINE.

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How poor, how rich, how abject, how august;  
How complicate, how wonderful is man!  
How passing wonder He who made him such!  
When centred in our make such strange extremes!  
From different natures, marvellously mixed,  
An heir of glory! a frail child of dust!  
Helpless immortal! insect infinite!  
A worm! a God!—I tremble at myself,  
And in myself am lost.

YOUNG.

*“I am fearfully and wonderfully made, O Lord,”* exclaimed David, on surveying the admirable mechanism of his own frame. Indeed so complicated and curious is the structure of the human frame, that no person, who contemplates it, can possibly avoid joining with the pious Psalmist.

That illustrious physician of antiquity, Galen, is reported in his youth to have been a sceptic, but on witnessing a dissection, and examining the mechanism of the human body, the divine wisdom and design running through all its parts, he was struck with such a sense of the great Architect, that he immediately became a convert, and during his life devoted himself to the worship of the deity with all the fervor becoming an enlightened and grateful mind. Having himself caught the first spark of Divine light from a survey of this wonderful machine, he earnestly recommends to others the study of it as the noblest employment of the faculties and one of the surest guides to rational devotion. His thoughts on this subject, though emanating from a heathen, are

well worthy the attention of all Christians.—“Those treatises,” says he, “which display the excellencies of the great CREATOR, compose one of the noblest and most acceptable hymns. To acquaint ourselves with his sublime perfections, and point out to others his infinite POWER, his unerring WISDOM, and his boundless BENIGNITY—this is a more substantial act of devotion, than to slay hecatombs of victims at his altar, or kindle mountains of spices into incense.

Now, as one object of “The Family Physician” is to treat of the art of preserving this divine piece of workmanship in a healthy state, nothing can impress us more forcibly than the absolute necessity of being made acquainted with its parts, and the laws that govern them: without some knowledge thereof, it appears no more possible to take the right care of it, or to keep it in good order, than to perpetuate the regular motion of a clock, or time-piece, without a familiar acquaintance with its mechanism.

The study of *Anatomy*, as it leads to the knowledge of NATURE, needs not, says the illustrious Cheselden, many tedious descriptions, nor minute dissections, what is most worth knowing being soonest learned, and least subject to difficulty; while dividing and describing the parts more than the knowledge of their uses requires, perplex the learners, and make the science tedious, dry, and difficult.

Upon this principle, the following anatomical description of the human body is conducted; and to render it perfectly intelligible to the uninformed readers, technical terms have, as much as possible been avoided.

“When a master builder,” says the celebrated Hervey, whose sublime sentiments on this theme are at once so elegant and appropriate that I have taken the liberty to use them, “undertakes to erect a magnificent edifice, he begins with the less decorated, but more solid parts, those which are to *support*, or to *contain* the rest.” This order we will follow in considering the structure of the human frame.

The *Bones* are the hardest and most solid parts of the human machine, cast into a variety of moulds, en-

larged or contracted into a variety of sizes, and calculated from their strength, to *support* the whole body. The manner of their articulation is truly admirable, and remarkably various; yet never varied without demonstrating some wise design and answering some valuable end. They contain marrow, which makes them less brittle, and are covered with a membrane, or thin substance like a bladder, called periosteum, except on the skull, where it is called pericranium, which is exquisitely sensible in an inflamed state, being plentifully supplied with nerves and blood vessels. Its use is to sustain the vessels which enter the substance of the bones with their nourishment. The *Head*, designed for the residence of the brain, is framed in exact conformity to this important purpose, ample to receive it; strong to uphold it; and firm to defend it.

The *Ribs*, turned into a regular arch, are gently moveable for the act of respiration. They form a secure lodgment for the lungs and the heart.

The *Backbone* is intended not only to strengthen the body, and sustain its most capacious state-rooms; but also to bring down that appendage of the brain; which is usually termed spinal marrow.

The *Arms*, pendent on either side, are so exactly proportioned to each other, that the equilibrium of the structure may not be disconcerted. These being the guards which defend, and the ministers which serve the whole body, are fitted for the most *diversified* and extensive operations; firm with bone, yet not weighty with flesh; and capable of performing, with singular expedition and ease, all manner of useful motions. To these are annexed the *hands*, and all terminated by the *fingers*; which are not, like the arms, of the same length, and of equal bigness, but consisting of various little bones, and a multitude of muscles, what shape can they not assume? what service can they not perform?

The *Thighs* and *Legs* are alike substantial and stately columns; articulated in such a manner, that they administer most commodiously to the act of walking, yet obstruct not the easy posture of sitting. The legs swell out towards the top with a gentle projection; and

are wrought off, towards the bottom, with neat diminutions. Which variation lessens their bulk, and at the same time increases their beauty.

The *Feet* compose the firmest and neatest pedestal; infinitely beyond all that statuary or architecture can accomplish: capable of altering their form, and extending their size, as different circumstances require. Besides performing the office of a pedestal, they contain a set of the neatest springs, which help to place the body in a variety of graceful attitudes, and qualify it for a multiplicity of advantageous motions. The undermost part of the heel, and the extremity of the sole, are shod with a tough, insensible, sinewy substance. This we call a *natural sandal*. It never wears out, never wants repair, and always prevents that undue compression of the vessels, which the weight of the body, in walking or standing might otherwise occasion.

While many animals creep on the ground, while all of them are prone in their posture or their aspect, the attitude of man is *erect*, by far the most *graceful*, with an air of dignity, and bespeaking superiority; and by far the most *commodious*, fitting us for the prosecution of every grand scheme, and facilitating the success of all our extensive designs. It is likewise attended with the greatest safety; being, if not less than any other position exposed to dangers, more happily contrived to repel or avoid them.

The *Cartilages*, approach much to the nature of bones, being smooth and elastic. In them there is no sensible cavity to contain marrow, nor are they covered with any membrane to render them sensible as the bones are. They serve to make the bones, whose extremities they cover, more freely in their joints. They also contribute, in a great measure, to the formation of several parts, as the wind-pipe, nose, ears, and breast.

The *Ligaments* are tough, compact substances, more flexible than cartilages. They have no conspicuous cavities, neither have they any sensibility, lest they should suffer upon the motion of the joint. They serve to unite the several limbs, and prevent their parting from each other as happens in dislocations.



The *Muscles* are distinct portions of soft, red flesh, with strong tendinous heads and tails designed for insertion. They are composed of the slenderest fibres, yet endued with incredible strength; fashioned after a variety of patterns, but all in the highest taste for elegance, conveniency and usefulness. These, with their tendons annexed, constitute the instruments of motion. The former contracting their substance, operate somewhat like the pulley in mechanics. The latter resembling the cord, are fastened to a bone or some portion of flesh; and following the muscular contraction, actuate the part into which they are inserted. This, and all their functions, they exercise, not like a sluggish beast of burden, but quick as lightning. A nerve or more in each muscle sets them at work, diffusing the power of sensation through the body, or returning upon an impression from without, giving all needful intelligence to the soul; so that flesh and nerves are the principal constituents of a muscle. *Inwardly*, they supply the several movements of the active machine: *outwardly* they render its appearance plump, well proportioned, and graceful.

The strength of the *muscles* is astonishing in all persons, but especially in cases of frenzy and in certain extraordinary characters, who by the use of a few muscles only, will easily raise a weight much greater than that of their own bodies.

The *Tendons*, although much smaller than the body of the muscle, are composed of the same number of fibres. They are not capable of contraction, but serve like ropes to pull when the fleshy fibres act, for the commodiousness and firmness of insertion, and the direction of motion.

The use of the tendons is to avoid a large quantity of flesh near the joint, to prevent clumsiness in particular places, and for the better admitting of that friction, which in less compact parts would have been injurious.

The *Nerves* are surprisingly minute, white cords, derived from the brain, running to every part of the body. They perform two distinct offices; conveying sensation from all parts of the body to the brain, and carrying the

commands of the will from that seat to all the different parts of the body. Most of the muscles of the body producing motion are in the guidance of our will; some of them, however, entirely independent of it, as those of the heart and vessels which carry on the circulation of the blood; and some are partly under the direction of our will, and partly independent of it, as in respiration.

But all the muscles, the involuntary as well as the voluntary, are enabled to act only by their communication with the brain; for when that is cut off by the destruction of the connecting nerve, whatever impression is made on the part can no longer be felt; the orders of the will to that part can no longer be obeyed, and the part itself can no longer move.

The *Arteries* are strong elastic tubes, which arise from the heart; and thence, striking out, as they go into numberless smaller canals or branches, distribute the blood to every part of the body. These being wide at their organ, lessening as they branch themselves, check, the rapid motion of the blood. To sustain this shock, they are indued with uncommon strength; by performing the service they oblige the crimson current to pass into the *narrowest defiles*, and distribute itself into all quarters. The blood thrown from the heart dilates the arteries, and their own elastic force contracts them; by which means they vibrate, in proper places, very perceptibly against the finger; bring advices of the utmost importance to the physician; and very much assist him—both in discovering the nature of diseases, and prescribing for their cures. The larger arteries, wherever the body is formed for bending, are situated on the bending side; lest, being stretched to an improper length by the inflections, their dimensions should be lessened, and the circulating fluid retarded. They are not like several of the considerable veins, laid so near the surface as to be protrusive of the skin; but are deposited at a proper depth in the flesh. This situation renders them more secure from external injuries.

The *Veins* are tubes or vessels accompanying the arteries, and are appointed to receive the blood from their extremities, and reconvey it to the heart. Small

at their rise, and enlarging as they advance, they are void of any pulsation. In these, the pressure of the circulating fluid is not near so forcible as in the arteries; for which reason their texture is considerably slighter. In many places they have valves, because the slow motion of the blood in the veins, and their weaker contractile power unassisted by a force adequate to that of the heart, have great need of such an invention to ensure its return to the heart.

The *Secretory vessels* are minute tubes in the different organs serving to separate and strain off the different fluids from the general mass of blood.

The *Excretory vessels*, tubes also belonging to the different organs, carry off the humors that are separated.

The *Glands*, commonly called Kernals, are small bodies of finely interwoven vessels, whose office it is to secrete or separate fluids from the blood for particular uses, as spittle in the mouth, bile in the liver, milk in the breast, &c. Glands, when obstructed, become large and indurated, from which scirrhus and cancers are produced.

The *Membranes* are thin tunics or fine webs like a bladder, appointed to unwrap the fleshy parts; to form a connexion between some, to line the cavities, and make a separation between others.

The *Fibres* are simple thread-like bodies, serving to form other parts; hence some are very hard, as the bony ones; and others are soft, as the fleshy parts.

The *Skin*, like a curious surtout, exactly fitted, envelops the whole, formed of the most delicate net-work; whose meshes are minute, and whose threads are multiplied even to prodigy. The meshes are so *minute* that nothing discernible to the eye passes them; though they discharge every moment myriads of superfluous incumbrance from the body. The steam arising from the warm business transacted within is, carried off by these real though imperceptible funnels; which constitutes what we usually call *insensible perspiration*. A single grain of sand, according to L. Lewenhok, will cover no less than one hundred and twenty-five thou-



sand of these funnels, or what has been prettily styled "*cutaneous chimneys*." The threads are so multiplied, that the point of the smallest needle cannot pierce any single part without causing an uneasy sensation, and an effusion of blood; consequently without wounding, even by so small a puncture, both a nerve and a blood-vessel.

The outermost covering of the body is that soft whitish tegument which rises in the pustule of a blister, and is called scarf skin. The next, or *true skin*, is that reddish and exquisitely tender part which appears when the blister is broken, and the dead skin taken off. The first is void of sense, and intended to screen the second, not only from the stroke of injuries, but even from the impressions of the air, which, mild as it may feel to the *sheathed*, would be too rough and sharp for the *naked* nerves.

The natural color of the cuticle is white. The apparent, black or brown color, in the African or Indian, is entirely owing to the mucous substance under it.

The *skin* unites in itself two very essential functions. It is the organ of the sense of the *touch*, and the channel of perspiration. For this purpose innumerable nerves and vessels are dispersed throughout the skin, which are in the continual act of feeling, and at the same time, of secreting and volatilizing noxious particles. It has been proved by accurate experiments, that the healthy individual daily and insensibly perspires upwards of three pounds' weight of superfluous and impure humors. It may therefore be confidently asserted, that no part of the body is provided with so many important organs, by which it is connected with almost every operation performed in animal life, as the skin.—By this organization, we are placed in immediate connexion with the surrounding atmosphere, which particularly affects us through the skin, and exerts its influence on our health. We farther feel, directly through that medium, the qualities of the air, heat, cold, pressure, and rarefaction.

Important as the skin is to external life, it is no less so to the internal economy of the body, where it ap-



pears to be peculiarly designed to preserve the grand equilibrium of the different systems, by which the human frame is supported in its vital, animal, and sexual functions. If any stagnation, accumulation, or irregularity arise in the fluids, the skin is the grand and ever ready conductor, through which the superfluous particles are separated, the noxious volatilized, and the fluids, stagnating in their course, effectually attenuated; a canal being at the same time opened for the removal of those humors, which, if they could get access to the vital parts, such as the heart and brain, would cause inevitable destruction. By the proper exercise of this organ, many diseases may be suppressed in their early stages; and those which have already taken place, may be most effectually removed. No disease whatever can be healed without the co-operation of the skin.—The nature and constitution of this organ most certainly determine either our hope or apprehension for the safety of the patient. In the most dangerous inflammatory diseases, when the prospect of recovery is gloomy, a beneficial change of the skin is the only effort by which nature, almost overcome, relieves herself, and ejects the poison in a surprising manner, frequently in the course of one night. The greatest art of a physician, indeed, consists in the proper management of this extensive organ, and in regulating its activity, where occasion requires. To mention only one circumstance; it is well known to those who have experienced the beneficial effects of a simple blister, that its stimulus, like a charm, has frequently relieved the most excruciating pains and spasms in the internal parts.

When the sensibility of the surface is impaired; when the myriads of orifices designed for the continual purification of our fluids, are obstructed, if not closed; when the subtile nervous texture is nearly deprived of its energy, so that it becomes an *impenetrable coat of mail*, is there any reason to wonder that we are so often harrassed by a sense of constraint and anxiety, and that the uneasiness, in many cases, terminates in gloom and melancholy? Ask the hypochondriac, whether a certain degree of the cold, paleness, and spasmodic sen-

sation in the skin, does not always precede his most violent fits of imbecility; and whether his feelings be not most comfortable when the surface of his body is rigorous, warm, and perspires freely? In short, the degrees of insensible perspiration are to him the surest barometer of the state of mind. If our skin be disorganized, the free inlets or outlets of the electric, magnetic, and other matters, which affect us at the change of the weather, are inactive. Thus the origin of extreme sensibility, towards the various atmospheric revolutions, is no longer a mystery; for, in a healthy surface of the body, no inconvenience will follow from such changes. If we farther advert to those acrimonious fluids, which, in consequence of an imperfect state of perspiration, are retained in the body, and which affect the most sensible nerves and membranes, we shall the better comprehend how cramps and spasms, the torturing pains of the gout and rheumatism, and the great variety of cutaneous diseases, have of late become so obstinate and general. The just proportion of the fluids, and the circulation of the blood, are also determined, in no small degree, by the skin; so that, if these fluids become languid, the whole momentum of the blood is repelled towards the inferior parts. Thus a continual plethora, or fullness of the blood, is occasioned; the head and breast are generally oppressed; and the external parts, especially the lower extremities, feel chilly and languid.

May we not infer, from what has been advanced, that the use of baths is too much neglected, and ought to be universally introduced?

Bathing is considered an excellent remedy for alleviating both mental and bodily affections. It is not merely a cleanser of the skin, enlivening and rendering it more fit for performing its offices; it also refreshes the mind, and spreads over the whole system a sensation of ease, activity, and pleasantness. It likewise removes stagnation in the larger, as well as in the smaller vessels, gives a uniform, free circulation to the blood, and preserves that wonderful harmony in our inferior organs, on the disposition of which our health and comfort so

much depend. A person fatigued or distressed in body and mind, will derive more refreshment from the luxury of a tepid bath, and may drown his disquietude in it more effectually, than by indulging in copious libations to Bacchus.

There subsists so intimate a relation between our interior and exterior vessels, that almost every error or irregularity in the organs within, shows itself first on the surface of the body, particularly on the face. How often are we struck with the countenance of a person who thinks himself in perfect health, but whose illness, the result of some morbid cause, concealed in the body, justifies, in a few days, the serious apprehensions we entertained at our last interview? Nature has wisely ordained, that the first appearance of internal irregularities should be indicated by the countenance, but to what do we generally apply this index? We refuse to avail ourselves of her beneficent intimation; and the continual use of pernicious substances, instead of promoting the object we have in view, ultimately tarnishes and impairs that beauty which we meant to adorn and preserve.

The secret venom circling in her veins,  
Works through her skin, and bursts in bloating strains;  
Her cheeks their freshness lose, and wonted grace,  
And an unusual paleness spreads her face.—GRANVILLE.

We imagine it in our power to improve the skin, without attending to the purity of the fluids, though it is indebted to them for its very existence; and yet we should smile at a person who should attempt to cleanse an impure tongue by constantly scraping it when a disordered stomach was the real cause of that impurity.

The *Cellular Membrane*, so called from its numerous cells, adheres very closely to the skin, running between the muscles in general, and between their several fibres in particular; and communicating with the membrane which lines the inside of the breast and belly. All its cells communicate with each other throughout the whole body, so that from any one part the whole may be filled with air, as is evident in beasts, from the



butchers blowing up their lean meat with air when newly killed, and in emphysema, where the air from a broken rib, getting into one of the cells, forces its way into all the rest, distending the body to a frightful size; as also, in general dropsy, wherein all the cells, filled with water, may, by puncture, be emptied in the course of a night. In health this membrane is filled with an oily substance, giving an agreeable rotundity to the limbs. It is also the seat of biles, and contributes to keep the inner parts warm and pliant; and, by filling the interstices of the muscles, renders the surface of the body smooth and plump.

The *Head*, that majestic dome, being the seat of the brain, in which the soul is supposed to reside, resembles the *General's* tent in an army, or the *Monarch's* in a city. It has a communication established with all, even the most remote parts of the system; having outlets and avenues, for the ready despatch of couriers to all quarters, and for the reception of speedy intelligence on every interesting occasion. It is furnished with lodgments wherein to post sentinels of various characters, and appoint to various offices, to expedite their operations, whether employed in reconnoitering what passes *without*, or examining what claims admittance *within*. The whole turns upon a curious pivot, most nicely contrived to afford the largest and freest circumvolutions. This stately capitol is screened from heat, defended from cold, and at the same time beautified by a copious growth of hair.

The GREAT CREATOR, profusely gracious to mankind, has made us an inestimable present of the SENSES to be the inlets of innumerable pleasures, and the means of administering the most valuable comforts.—High in the head, bright and conspicuous as a star in the brow of evening, is placed the *eye*. In this elevated situation, like a sentinel posted in his watch tower, it commands the most enlarged prospect. Consisting only of simple fluids, enclosed in thin tunicles, it conveys to our apprehension all the graces of blooming nature, and all the glories of the visible heavens. How prodigiously wonderful that an image of the highest



mountains, and a transcript of the most diversified landscapes, shall enter the small circlet of the pupil! How surprisingly artful, that the rays of light, like an inimitable pencil, should paint on the optic nerves, paint in an instant of time, paint in the *truest* colors, and *exactest* lineaments, every species of external objects.

The *Eye* is so tender, that a slight accident, scarce perceivable by some other parts of the body, proves very injurious to its delicate frame. It is guarded therefore, with the most solicitous care; with a care evidently proportioned to its nice texture, and extensive usefulness. It is *entrenched* deep in the head, and *barricaded* on every side with a strong fortification of bones. The wisdom and goodness of the Creator appear in the astonishing apparatus of muscles with which the eye is furnished to produce all the necessary and convenient motions in the situation where it is placed. The eyebrows serve to defend this delicate organ from too strong a light; and as the incursion of the smallest fly would incommode the polished surface, it is farther defended by two substantial *curtains* (eyelids) hung on a most slender cartilaginous rod, which secure it from floating dust and from every troublesome annoyance.— In sleep, when there is no occasion to exercise the sense, but an absolute necessity to protect the organ, these curtains *spontaneously* close, and never fail to lie shut. On the inside of these curtains or eyelids, lie glands, which secrete a limpid fluid, that lubricates the eyeball, as often as we wink, or, as it were, oils its wheels, and fits it for a course of unwearied activity.

The *Ear* consists of an outward porch and inner chambers, with tools of the most admirable contrivance, and finished workmanship. The *porch* is that *cartilaginous* substance standing somewhat prominent from the head, covered with a tight expansion of the skin, and wrought into irregular bends and hollows; which, like circling hills, or surrounding rocky shores, collect the wandering undulations of the air, and transmit them with vigorous impulse to the finely stretched membrane of tympanum, or drum of the ear. The *avenue*, or narrow entry, is secured from the insinuating attempts

of little insects, by a *morass* of bitter and viscous matter, disgusting to their taste and embarrassing to their feet. The *hammer* and the anvil, the *stirrup* and the *drum*; the winding labyrinths, and the winding galleries; these and other pieces of mechanism, instrumental to the power of hearing, are, beyond description curious.

Amazingly nice must be the formation, and inconceivably exact the tension of the auditory nerves, since they correspond with the smallest tremors of the atmosphere, and easily distinguish their most subtle variations. With the gentle gales that fan us, or even with the ruder blasts that assault us, these delicate strings are but little affected. Whereas, they are perfect *unisons* with those fine, those significant agitations of the air, which the acutest is unable to discern. These living chords, tuned by the touch of an Almighty hand, and diffused through the echoing aisles and sonorous cells, receive the impressions of sound and propagate them to the brain. These give existence to the charms of music, and reciprocate the rational entertainments of discourse. The *eye* perceives only the object *before* it; whereas the *ear* warns us of transactions above us, behind us, all around us. The eye is useless amidst the gloom of night, and cannot carry its observation through the bolted door or the closed window shutter; but the ear admits intelligence through the *darkest* medium and the minutest cranny. Hence, when we cannot see a friend, because of an interposing partition, yet, by the friendly aid of this organ, we can learn that he is in the adjoining room by his voice, or that he is near by his steps. The eye is upon duty only in our waking hours; but the ear is always expanded, and always accessible; a courier which never tires, a sentry ever in his box. To secure a resource, in case any misfortune should disable *one* of the hearing or seeing organs, our all gracious MAKER has given us *duplicates* of each.

As there are tremulous concussions impressed upon the air, discernible only by the instruments of hearing; there are also *odoriferous* particles wafted by the same

ærial vehicle, which are perceivable only by the *smell*.

The *Nostrils* are wide at the bottom, that a large quantity of affluvia may enter; narrow at the top, that when entered, they may close their ranks, and act with great vigor. Fine, beyond all imagination, are the streams exhaled from fetid or fragrant bodies. The very best microscopes, which discover *thousands* and tens of *thousands* of animalcules in a drop of purified water, cannot bring one individual among all these evanescent legions to our sight. They sail in numberless squadrons close to our eyes, close by our ears; yet are so amazingly attenuated, that they elude the search of both. Nevertheless, so judiciously are the olfactory nets laid, and so artfully their meshes seized, that they catch these vanishing fugitives. They catch the roaming perfumes, which fly off from the opening honey-suckle, and take the stationed sweets which hover round the expanded rose. They imbibe all the balmy fragrance of spring, all the aromatic exhalations of autumn, and enable us to banquet even on the *invisible* dainties of nature.

Furnished with these several organs,  
 \* \* \* \* \* not a breeze  
*Flies o'er the meadows, not a cloud imbibes*  
*The setting sun's effulgence, not a strain*  
 From all the tenants of the warbling shade  
*Ascends, but whence our senses can partake*  
*Fresh pleasure.*—AKENSIDE.

Another capacity for frequent pleasure, our bountiful CREATOR has bestowed in the power of *taste*; by means of which the food, that supports our body, feasts our palate; first treats us with a pleasing regale, then distributes its beneficial recruits. The razor, whetted with oil, becomes more exquisitely keen; so the *saliva*, flowing upon the tongue, and moistening its nerves, quickens them into the liveliest acts of sensation. This sense is circumstanced in a manner peculiarly benign and wise; so as to be a standing, though silent plea for *temperance*.

The sight, smell, and taste, are not only so many sep-



arate sources of delight, but a joint security to our health. They are the *vigilant* and *accurate* inspectors which examine our food, and inquire into its properties, pleasant or disagreeable, wholesome or noxious. For the discharge of their offices, they are excellently qualified, and most commodiously situated; so that nothing can get admission through the mouth, till it has undergone the scrutiny and obtained the passport of each.

To all these, as a most necessary and advantageous supplement, is added the sense of *feeling*; which renders the assemblage complete. While other senses have a particular place of residence, this is diffused throughout the *whole* body. In the palms of the hands, on the tips of the fingers, and, indeed, through all the extreme parts of the flesh, it is most quick and lively. The whole army of Xerxes drawn out in battle array, with his millions of supernumerary attendants, was but as a few *gleaners* straggling in the field, if compared either in number or order, with those nervous detachments which pervade the texture of the skin and minister to the act of feeling.

The *crowning gift*, improving the satisfaction, and augmenting the beneficial effects of all the senses, is speech. Speech makes me a gainer from the eyes and ears of other people; from the ideas they conceive, and the observations they make. And what an admirable instrument for articulating the voice, and modifying it into speech is the *tongue*! The tongue has neither bone nor joint; yet fashions itself, with the utmost volubility, into every shape and every posture, to express sentiment, or constitute harmony. This little collection of muscular fibres, under the conducting skill of the CREATOR, is the artificer of our words. By this we communicate the *secrets* of the breast, and make our very thoughts audible. By this we instruct the ignorant, and comfort the distressed; we glorify God, and edify each other.

Who would not bless for this the gift of speech,  
And in the tongue's beneficence be rich?

But still, what is the mansion of flesh though so ex-



quisitely wrought, compared with the noble and immortal inhabitants, which reside within?

\* \* \* \* \* “*That intellectual being,  
Those thoughts which wander through eternity.*”

The *mind*, or *soul*, of much higher character than that of the perishable frame with which it is connected, has neither *nerves*, nor *nervous fluids*. These are only its agents, in this its imprisoned state. When the “*silver cord*” is broken, which connects MIND and MATTER together, vitality ceases. The body then, with all its artful and numerous vessels, fibres, and nerves, and other exquisite *machinery*, undergoes decomposition, and is turned into its original elements; but the IMMORTAL SOUL, having shaken off this coil, is destined for a new residence; to flourish in eternal youth; to outlive the wreck of elements and the crush of worlds. It is embodied even in its residence in another world.—“Thou fool,” says the philosopher and apostle, “that seed which thou sowest is not quickened except it die. And that which thou sowest is not that body which shall be, but God giveth it a body as it hath pleased him, and to every seed its own body. So, also, is the resurrection of the dead. The body is sown in the earth in dishonor, it is raised in glory; it is sown in weakness, it is raised in power; it is sown a natural body, it is raised a spiritual body. Behold, I show you a mystery. We shall not all sleep, but we shall all be changed. In a moment, in the twinkling of an eye, at the last trump; for the trumpet shall sound, and the dead shall be raised incorruptible, and we shall be changed. For this corruptible must put on incorruption, and this mortal must put on immortality.” Man, therefore, is not what he will hereafter be. What we discover of him here below, is only the gross *foldage*, in which he crawls upon the earth, and which he must shortly cast off.

The animal body has no other relation than to this earth. The spiritual body will have enjoyments which “*ear hath not heard, nor hath it entered into the heart of man to conceive.*” New senses will be disclosed, multiplying perfections in an almost infinite degree.—

Man's sphere will be aggrandized, and he will become equal to superior intelligences. Revelation informs us it will be so; and the parable of the seed is the most expressive and philosophical emblem of this wonderful preordination.

The senses, as they are brought into subjection to the soul, will no longer rule over her. Separated from flesh and blood, there will remain in her none of those earthly affections resulting from them. Transported into the regions of light, the human understanding will present no ideas to the will, but those of the highest good. It will then have no other than lawful desires, and God will be their constant and ultimate end. It will love him from gratitude; fear him from a principle of love; and adore him as the supremely amiable being, the eternal source of life, perfection, and happiness.

The *Thorax*, or breast, is situated between the belly and neck. The front part is commonly called the breast; the posterior part the back; and the lateral parts the right and left sides.

Before we take notice of the internal parts, it may be proper to speak of the mammæ or breasts.

These are two glandular bodies, of a round oval figure, most remarkable in women. The period of their growing full in the female, is about the age of fourteen or fifteen, and of their decreasing, fifty. The breasts are composed of a vast multitude of minute vessels to secrete the milk from the blood. These vessels, as they approach the nipple, fall into, and form eight or ten large pipes, connected together with admirable skill, that, in case of any obstruction or accident in any one or more of them, the milk might not be obstructed.

The swelling of the breasts, during the time of gestation, is owing to the consent between them and the womb.

The cavity of the breast is lined by a fine smooth membrane, named pleura, and contains those two grand organs, the heart and lungs.

The *Lungs* are divided into two large portions, called lobes; the one on the right and the other on the left side.

The vessels which enter the lungs, are the trachea, or wind-pipe, by which we draw in the air ; the pulmonary artery which comes from the right ventricle of the heart ; and the pulmonary vein, whose trunk opens into the left ventricle of the heart:—Each of these divides into two branches.

The lungs differ from every other part of the body in this respect : the wind-pipe, in its minutest ramifications, passes through all parts of its substance, terminating every where in air vesicles, for the grand purpose of respiration, which keeps it in a continued state of action and reaction. Hence, when the lungs are diseased, their motion is not only increased by the respiration being quickened, but they suffer violent concussion by means of coughing. This circumstance renders disorders of the lungs more peculiarly difficult to cure.

The *Heart* is a strong, active, indefatigable, muscular body, of a conical figure, included in an exceedingly strong membranous bag, called the pericardium, or heart purse, and situated in the cavity of the chest. It has two separate cavities, called ventricles, out of which issue the two large arteries of the human body, one called pulmonary, or artery of the lungs, the other aorta, or large artery of the body, from which all the other arteries go off, as branches of a tree from its trunk, dividing themselves into minute ramifications in their progress. Near the mouths of these two ventricles are two other hollows, which, from their similitude to dog's ears, are called auricles, into which the veins, returning from all parts of the body with the blood, through two large trunks or channels. It has two motions, called *systole* and *diastole* ; the former is when it contracts itself, and thereby forces the blood into the arteries.—The diastole is when it relaxes itself, and receives the blood from the veins. The ventricles of the heart are each capable of receiving an ounce of blood or more, and, therefore, being full in their diastole, we may suppose that they throw out, at least, one ounce of blood each systole. The heart contracts about four thousand times in an hour, more or less, according to the different



temperaments, sexes, and ages ; and, therefore, there pass through the heart, every hour, four thousand ounces, or two hundred and fifty pounds' weight of blood.— Now, the common opinion is, that the whole mass of blood does not exceed twenty-five pounds, and, therefore, according to this allowance, a quantity of blood equal to the whole mass, passes through the heart ten times in an hour ; that is, about an ounce every second. If the heart contracts eighty times in a minute, then twenty-five pounds' weight of blood pass through its ventricles once in five minutes, or twelve times in an hour. The farther the blood moves from the heart, its velocity decreases as the artery divides into more branches, so much so, that the blood moves 5233 times slower in some capillary arteries than it does in the aorta or great artery. The blood is received from the arteries into the veins, where it still moves, more slowly as it returns to the heart again. The arteries are to the veins as 324 to 441, and, consequently, the blood moves in the veins about 7116 times slower than it does in the aorta.

The heart is the grand organ of the circulation of the blood, and, consequently, of life. Impelled by this beating engine, part of the blood shoots upwards, and sweeps, with a bounding impetus, into the head. There it impregnates the prolific fields of the brain ; and forms those *subtile spiritous* dews, which impart sense to every nerve, and communicate motion to every limb.— Part flows downward ; rolls the reeking current through all the lower quarters ; and dispenses the nutrimental stores, even to the meanest member, and the minutest vessel.

Observe, how the stately *Ohio* and the lordly *Mississippi* refresh the forest and groves ; water the towns which crowd their banks, and make the meadows which they intersect, laugh and sing. So, only with an incomparably *richer* fluid, and with infinitely *more numerous* streams, this human river laves the several regions of the body, transfusing vigor, and propagating health through the whole. The living flood never discontin-



ues its interchangable tide ; but night and day, whether we sleep or wake, still perseveres to sally *briskly* through the arteries, and return softly through the veins.

Such astonishing expedients are used to elaborate the chyle, to blend it with the blood, and to distribute both through the body, that the animal constitution is perfectly maintained. In youth, its bulk is increased ; in age, its decays are repaired ; and it is kept in tenantable condition for the soul during the space of seventy or eighty years.

The doctrine taught by the immortal Harvey, the discoverer of the circulation of the blood, is, that all the veins of the body falling into two trunks, viz : the ascending and descending cava, empty themselves into the right auricle of the heart. The right auricle unloads into the right ventricle of the heart, which throws the blood through the pulmonary artery, into the lungs, by its two branches, which go to the right and left lobes.

From the lungs the blood is brought back by the pulmonary veins, into the left auricle, and thence it passes into the left ventricle, from which it is distributed through the body by the aorta, or large artery and its branches. These terminate in the veins of the body, which collect the blood and brings it back to the heart, by the two cava, or large veins.

In other words, the blood is conveyed from the left ventricle of the heart, by the aorta and its branches, to the minutest and most remote parts of the body, and then, passing from the extremities of the smallest arteries into the incipient veins, circulates through them into their larger branches, and so on into the right auricle of the heart, thence into the right ventricle, whence it is forced, with the fresh supplies that it receives from the chyle in passing through the subclavian vein, into the pulmonary artery, and, after circulating through, and being acted upon by the lungs, in its passage through them, is returned by the pulmonary vein into the left auricle, and thence into the left ventricle, and so on, the same round, until death concludes the progress.

There is in the consideration of the organs performing the circulation of the blood, an air of grandeur that

seizes forcibly on the mind, and penetrates it with the highest admiration.

We perceive that the blood, every time it is returned to the right ventricle of the heart, is directly dispersed through the lungs, and immediately reconveyed to the heart, before it is permitted to begin a new circulation. In the study of nature throughout all her work, however complex the machine, the utility of each part ever claims the admiration of the speculative mind.

The observation is beautifully illustrated on the present occasion, and "I believe it will be admitted by every one," says the ingenious author of the *Medical Extracts*, "that the blood, after having performed one round, throughout the animal economy, undergoes some new and important change in its transit through the lungs, especially requisite to support a second circulation.— This change is certainly the oxygenation of the blood, and we should expect, if oxygen be the natural stimulus to the heart and arteries, that their pulsation would be in proportion as the blood had access to this principle."

That animal heat depends upon the action of the arteries, and the circulation of the blood in general, is very natural to imagine; because whatever increases the velocity of the circulation, whether exercise, friction, or disease, also increases the internal heat; whereas, fainting, hemorrhage, and whatever produces a weak and languid circulation, also diminishes the heat of the body.

When a ligature is put round an artery, so as to prevent the blood from being carried to any particular limb, that limb becomes colder than it was, and does not recover its natural heat, until, by removal of the ligature, or expansion of the branches, which go off from above the ligature, the usual quantity of blood is circulated through the limb.

With a new-born infant, the first thing is to infuse into its nostrils "the breath of life;" for until the lungs be expanded, and the venal or purple blood changed into an arterial or crimson in that organ, the heart does not contract, nor the arteries vibrate; like a clock not wound up, though sound in all its parts, remaining entirely at rest. In the clock, if we wind it up, the main-

spring applying its powers, all the wheels are immediately put in motion, and it marks its hours and minutes; so, likewise, in the animal machine, the blood in the lungs having imbibed the vital principle from the air, the heart acquires its actions, the brain its energy, the nerves their sensibility, and the other subordinate springs of life presently resume their respective functions.

No organ can be severely affected without affecting the heart, and disturbing its functions; nor can the heart be in the smallest degree affected, without disturbing every function of the animal economy.

But the heart is not only affected by what injures the body, but also by what ruffles the mind. Rage occasions frequent and forcible contractions; sorrow, slow and languid ones; and there are instances of violent passions suspending the contractions of the heart altogether, and occasioning death. The heart is not only affected by whatever hurts the body or mind of the person to whom it belongs, but also by what hurts the bodies or minds of others. But the extent of this kind of sympathy differs greatly in different persons. In some it embraces children, friends, relations, countrymen, and in a certain degree, the whole human race; in others, it seems to be confined within the limits of their own bodies, or at most, reaches with a blunted sensibility no farther than to those whom they conceive to be their own offspring. While the blood is in circulation, various liquors are separated from it by a process called *secretion*, all these secretions being necessary for the health and preservation of animal life. When it is taken from the vein by the usual mode of bleeding, and left to itself, it soon congeals, and appears to be composed of two distinct parts, called crassamentum, or solid, and serum, or liquid. In a mass of healthy human blood, about one half is crassamentum, which hath red color to itself. The serum in a healthy state is almost colorless; at other times it is yellowish, or of a greenish hue, while the top of the crassamentum has different degrees of firmness, and puts on different appearances, with respect to color, according to the constitution and health of the subject, from which it is ta-

ken. A due proportion of the respective parts of the blood is necessary to perfect health

The *Diaphragm*, or *Midriff*, is a large thin broad muscle, that divides the breast from the belly.

The uses of the midriff are, first to assist in respiration ; for, in taking in the breath, it is pressed downwards, and in expiration, it rises upwards into the cavity of the breast ; secondly, to assist the necessary motions of the stomach, intestines, liver, and spleen ; and for assisting the expulsion of the fæces, the urine, the fœtus, in parturition, of the secondines or after birth. It makes our passions by its irregular actions, as sighing, yawning, coughing, laughing. It is affected by spasms, as in hiccough.

The *Abdomen*, or *Belly*, lies between the breast and pelvis, which is formed by the juncture of the haunch bones.

The belly contains many of the principal parts of the human body, as the stomach, the intestines, liver, spleen, pancreas, kidneys, bladder, &c. On its inside, it is lined with a membrane called peritoneum, which is capable of a very great extension ; and afterwards can contract itself to its ordinary size, as we see in pregnancy, dropsy, corpulency, and repletion.

The *Stomach* may be considered a dilatation of the œsophagus or gullet, as it is a continuation of the same tube. Its figure nearly resembles the pouch of a bagpipe, and has two orifices, the one above from the gullet, through which it receives the crude aliment, the other below, whereby it conveys the partially digested food or chyle into the duodenum.

Before the food enters the gullet, it must of necessity pass over the orifice of the *wind-pipe*; consequently, must be in very imminent danger of falling upon the lungs which would, if not entirely obstruct the breath, yet occasion violent coughing, and great inconveniences. To obviate this evil, the all-foreseeing CONTRIVER has placed a *movable lid*, or hung a *cartilaginous draw-bridge*; which, when any of the smallest particle of food advances to enter the stomach, is pulled down, and shut close; but the very moment the morsel is swallowed, it



is set loose and stands open. By this two-fold artifice, the important passage is always barred and made sure against any noxious approaches; yet is always left free for the necessary accession of air, and commodious for the purpose of respiration.

When the malster prepares his grain for the transmutation of the brew-house, he suffers it to lie several hours steeping in the cistern, before it is fit to be spread on the floor, or dried on the kiln. The meat and drink likewise must remain a considerable time in the *stomach* before they are of a proper consistence and temperature, either for the tender coats, or the delicate operation of the bowels. For which purpose that great receiver is made strong to bear, capacious to hold, and so curiously contrived, as to lay a *temporary embargo* upon its contents. Here they are lodged in the very centre of warmth, and concocted by the most kindly combination of heat and humidity. Here they are saturated with other fermenting or diluting juices; and are kneaded, as it were, by the motion of the stomach, and compression of the neighboring parts. So that the very minutest fragment is separated; the whole is reduced to a *tenuity* abundantly finer than the exactest grinding could effect; and all is worked up into the smoothest, most *nicely mixed* pulp imaginable. From hence it is dislodged by a gentle acting force, and passes by a gradual transition into the cavity of the intestines.

The *Intestines* form one continual canal from the stomach to the *anus*, which is usually five or six times the length of the individual. It is curiously convoluted in the abdomen, and is extremely irritable. Although one entire tube, anatomists have divided it into the small and great intestines. The small intestines are called duodenum, jejunum, and ilium; the larger are the cæcum, colon, and rectum.

The *Duodenum*, so called because it is generally *twelve inches long* in adults, is the widest and shortest of the small intestines. At a short distance from where it joins the stomach, it receives two ducts, the one from the liver bringing the bile, and the other from the pan-

creas, or sweet bread, bringing its liquor to complete the digestion of the food. The second gut is the jejunum, so called, from its being usually found *empty*, its numerous lactael vessels having absorbed the chyle.

The *Ilium* is the third and last of the small intestines. The great length of the small guts is evidently for the convenience of a great number of lactaels, that the chyle which misses the orifices in one place may not escape them in another.

The *Cæcum*, or blind gut, is a pouch, as it were, of the Colon, about three inches long and called blind, from its being out of the direction of the passage of the food.

The *Colon* is the greatest and widest of all the intestines, about eight or nine hands' breadth long, and by lying so contiguous to all the bowels, it communicates all the benefits of the injections thrown into it.

When the colon is affected, there is a sense of weight, though the pain is very acute; whereas in the small guts there is not any sense of weight, but an acute pain. Sometimes a pain in the colon, attended with fever, the pain extended to the ribs, gives a suspicion of pleurisy, though the colon only is affected. The colon is narrower on the right side than elsewhere, whence colic pains arise more frequently, and are more severe in this part. The excrements are long retained here, and often are much indurated before they pass farther on.

The *Rectum*, or straight gut, is about a hand's breadth and a half long. It begins where the last curvature of the colon ends, and is terminated at the fundament. At its termination it is surrounded by circular muscular fibres, called the sphincter ani, to retain the fæces.

The intestines are not left to move at random in the cavity of the abdomen, but are artfully tied down by a membranous web, which prevents their circumvolutions from being entangled in each other, at the same time allowing a gentle but animated motion. That part of it connected with the small intestines is called mesentary, the other part fastened to the colon, mesocolon. All the

intestines have in their inner membrane an almost infinite number of very small glands, whose office it is to discharge into the intestines a liquor for the attenuation of the chyle, for lubricating the intestines, and in the large guts to soften the fæces, that they may be evacuated without pain. The intestinal canal serves to complete the first digestion, strain off the chyle, and carry off the fæces.

Had the intestines been *straight* and *short*, the food might have gone through them, without resigning a sufficient quantity of its nourishing particles. Therefore, this grandest of all the vital ducts is artfully convolved, and greatly extended, to afford an opportunity of sifting more thoroughly whatever passes, and of detaining whatever may serve its purposes. Though the alimentary substance can never mistake its way, yet it may, through some accidental impediment, attempt to return backward. In this case a valve intervenes, and renders what would be extremely pernicious almost impracticable.

Upon a survey of the use of the stomach and intestines, we cannot avoid being struck with wonder at its apparent simplicity answering so many salutary purposes. As soon as we take our food, it is received into a place in all points calculated to render it fit for yielding its nutritious contents. At first the food taken into the stomach, retaining its peculiar properties, irritates the coat of that organ and occasions a contraction of its two orifices. The food, thus confined, then undergoes a constant agitation by means of the abdominal muscles, and of the diaphragm, and by the motion of the fibres of the stomach, itself. By these movements, every part of the food is exposed to the action of a fluid secreted in the stomach, called the gastric juice, which gradually dissolves and attenuates the food, and prepares it for its passage into and farther change in the intestines.

The painful sensation of hunger, which is the irritation of the gastric juice on the coat of the stomach, or a sensation of a defective supply of chyle in the arterial system, being removed by the food, we soon feel a mild



and undescribable delight, first, from the stimulus of the aliment; and secondly from the distention of this, and the increased action of other parts.

The aliment having remained during two or more hours in the stomach, is converted first into a grayish pulp, which is called chyle. This fluid passes out of the right orifice, the fibres of which relax to allow it to escape: while the grosser and less altered particles remain in the stomach till they acquire a sufficient fluidity to pass into the intestinal canal. As the digested food enters the duodenum, it stimulates the common duct of the gall bladder, from which it receives a full supply of bile and of saliva, secreted from the pancreas.

The *chyle*, drawn off by all the secretory orifices, is carried along millions of the finest ducts, and lodged in several *commodious cells*. As a traveller, by taking proper refreshments on the road, is better qualified to pursue his journey; so the chyle, diverted to those little inns, is mixed with a thin, diluting watery substance, which renders it more apt to flow, and more fit for use. Hence it is conveyed to one *common receptacle*, and mounts through a perpendicular tube. When provision or ammunition is transmitted to an army, it generally passes under an escort of able troops. As this is the immediate support and principle nourishment of the whole system, its conveyance is guarded with peculiar caution. The *perpendicular* vessel that conveys it, not having sufficient force of its own, is laid contiguous to the great artery, whose strong pulsation drives on the creeping fluid, enables it to overcome the steep ascent, and unload its precious treasure at the very door of the heart. Here it enters the trunk of a large vein, secured by a valve, admirably constructed to prevent the reflux blood, in case it should offer to return, and opening a free, safe, and easy avenue to introduce this milk, this manna of nature.

The *Blood*, through every stage of its simple circuit, having sustained great expenses; being laid under contribution by every gland in the whole system; and having supplied myriads of the capillary vessels with matter



for insensible perspiration, must be very much *impoverished*; but is most opportunely recruited by this accession of chyle.

Besides the uses above specified, appropriated to the stomach and intestines, there is another, very considerable, bestowed, particularly on the former, by which impressions are diffused to almost every part of the machine, and from which all the sensible parts receive very peculiar and extraordinary advantages; namely, conveying action to different parts, and feeling the effect from these sympathetically and instantaneously. For instance a glass of wine or brandy, received into the stomach of a person exhausted with fatigue and ready to faint, gives instantaneous spirits and fresh vigor. This must proceed from the affection of the nerves of the stomach, and their sympathy with the rest of the body, as there is not time for the liquor to be conveyed into the blood in the usual manner.

The *Stomach* universally sympathises with other parts of the body. A blow on the head occasions vomiting. A disordered stomach often excites headach.—The headach, which is apt to come after drinking too much wine, or other strong liquors, certainly proceeds from the stomach, and is sometimes diminished or entirely removed by a dram. A stomach disordered by indigestion is often accompanied with flushings in the face, palpitations at the heart, difficult breathings, dejection of spirits, uncommon sensibility, and with giddiness.

The *Omentum*, or *Caul* is a fine membrane like network, larded with fat. It is situated under the peritoneum, and immediately above the intestines, on the surface resembling an apron tucked up. It serves to lubricate the intestines, that they may the easier perform their perisaltic motion, to cherish and defend them from cold, and to assist in the formation of the bile. It serves also to temper the acrimony of the humors, and probably, to give nourishment to the body, as all the other fat is supposed to do, when it is incapable of being nourished any other way.

The *Liver*, situated immediately below the diaphragm

or midriff, on the right side, reaches as far back almost as the spine, or back-bone and rests upon the right kidney. It is the largest gland in the body, and is divided into two unequal parts, called lobes. Except for the vessels, which are very numerous, the liver would be very soft, and like a piece of congealed blood.

The great use of the liver is to secrete the bile. It is the seat of various disorders, inflammation, abscess, schirrhus, &c., and in most of them, the continuance hath a pale color, or yellowish one with a green cast.— There is one circumstance not much attended to with respect to the situation of the liver; its large or right lobe occupies the whole half of the belly, where it lies from the spine to the inside of the ribs, laying over the upper part of the kidneys. Now this position of the liver is not often considered, for when one has a pain in the small of the back, it is said to be in the kidneys; but if it be a little higher up in the back, it is seldom if ever thought to be in the liver, though it must undoubtedly may, as its posterior edge lays on that part, on the right side.

The *Gall-Bladder*, or receptacle of bile, is fixed to the under side of the liver. Punctual as a porter in his lodge, it waits ready to pour its acrimonious, but salutary juices on the aliment, as it advances from the stomach; which *dissolve* its remaining vicissitudes, support the perisaltic motion of the intestines, and greatly assist in completing the digestion.

Such is the importance of the bile in our constitution, and the ill consequence of an error in it, that every aid is desirable, by which our knowledge of its nature can be promoted. When there is a defect of bile, it disposes the body to various diseases; as melancholy, indigestion. and obstruction of the viscera, &c. When there is a redundancy of bile, or it offends the stomach by its acrimony, it causes chilliness, shivering and great anxiety. It is certain, that in fevers the bile is not only plentifully generated, but peccant in its quality; and if not duly evacuated must be productive of many disagreeable symptoms; hence the importance of a soluble belly in febrile disorders.

The *Pancreas*, or *Sweet Bread*, a large gland, situated near the stomach, serves to secrete a liquor like the saliva, which is discharged, by a short duct into the duodenum.

The *Spleen* is situated under the cartilages of the left short ribs. In its natural and sound state, it is about six or seven inches long, about three in breadth, and one in thickness. It often becomes scirrous and considerably enlarged in persons who have been frequently attacked with intermittent. Its use is not precisely known.

The *Kidneys* are two oval bodies, situated in the loins, contiguous to the two last short ribs; the right under the liver, and the left under the spleen. They separate the urine from the blood.

The *Ureters* are tubes about the size of goose quills, and about a foot long; rising from the kidneys, and entering the bladder near its neck. They form to themselves, as it were, valves, so that, upon the contraction of the bladder, the urine is ejected through the urethra, its proper passage.

The *Bladder* is a membranous and fleshy sack or bag, capable of contraction and dilation, situated in the lower part of the belly. Around its neck, which is longer in men than in women, there goes a small sphincter muscle to contract the orifice, that the urine may not be involuntarily discharged. The use of the bladder is to receive the urine, perpetually secreted into it from the kidneys.

The *Uterus*, or *Womb*, between the urinary bladder and the rectum, or straight gut, is placed, by Divine Wisdom, in a situation of great security, called the pelvis or basin, being guarded on all sides by the strong bones that form the basis of the trunk. In figure, it very much resembles a pear, its broadest extremity, which is called its bottom, is uppermost, and its small part, the neck, is downwards. The womb, when impregnated, hath a very small cavity, but becomes larger as pregnancy advances, and, in the time of delivery, has its mouth wonderfully dilated, so as to give passage to the child.



About the age of puberty, the blood vessels of the uterus become distended, and secrete monthly a fluid called menses, catamenia, and vulgarly, flowers, courses.

The *Vagina*, or *Neck of the Womb*, extends from the mouth of the uterus to the pudendum or external parts. In women it enlarges, and, like the uterus, in the time of birth, dilates very much. Just within the vagina is the orifice of the urethra, which is shorter, wider, and straighter than in men.

Beside the womb and vagina, there are two other contrivances supposed to perform particular functions, in the propagation and formation of our species, the one called ovaria, from their retaining small round substances of the nature of eggs, the other Fallopian tubes, from their discoverer, Fallopius.

The *Fallopian Tubes* are situated on the right and left sides of the womb. They rise from its bottom by a narrow beginning, and dilate in the form of a trumpet to their extremities at the ovaria. Their cavity, where they open in the womb, will scarcely admit of a hog's bristle; but at its widest part. it will take in the end of one's little finger. The tubes are about four or five finger's breadth long.

They serve to convey from the ovaries the rudiments of the fœtus to the womb, where they are farther developed and perfected.

The *Ovaria*, or *Ovaries*, are two small bodies, situated on each side of the fundus uteris, or bottom of the womb behind the Fallopian tubes. At the age of puberty they are full and plump, and continue so until the menses are about to depart. They contain from ten to twenty or more pellucid eggs, supposed to contain the primordia of the fœtus.

The *Testes*, or *Testicles*, are two oval glandular bodies, seated in the scrotum, which serve to secrete the semen from the blood. The scrotum, or external covering, is made up of the scarf skin, true skin, and immediately under the latter, is a thick cellular texture closely adhering to it. It is likewise composed of many fleshy, or muscular fibres, by means of which the scrotum is contracted, and is reckoned a sign of health.



The *Prostrate Gland* is situated at the neck of the bladder ; and is about the bigness of a walnut. By some it is supposed to secrete a fluid merely to lubricate the urethra, and by others it is deemed subservient to the process of generation.

The *Urethra* is a canal or pipe of the thickness of a goose quill, and about twelve or thirteen inches long, which begins at the neck of the bladder, and terminates at the end of the penis. Its inner membrane furnishes a mucilaginous liquor, serving to defend it against the acrimony of the urine.

The *Penis* is composed of two spongy bodies, part of the urethra, the glands or nut at its extremity, and its integuments. The spongy bodies take their name from being porous like sponge, and capable of being distended and enlarged by the blood penetrating their substance, as in case of erection. The integuments of the penis make a hood to the glands or nut of the yard, called *prepuce* or foreskin. The small ligament, by which it is tied to the under side of the nut, is called *frænum*. The use of the prepuce or foreskin is to keep the nut soft and moist, and to preserve its sensibility. The amputation of it constitutes circumcision, a practice recommended by Moses to the Jews.

We shall now conclude the anatomical part of the human body, and trust enough has been said, concise as it is, to give to the uninformed readers just conceptions of the most important parts of the human machine, and its natural action.

We see the greatest multiplicity of parts, yet the most perfect harmony subsists between them all. No one hinders, but each assists the operation of another, and all conspire to the benefit and preservation of the whole. Most judiciously has the great apostle touched this subject ; and most happily applied it to illustrate the reasonableness, and enforce the practice, both of *personal* and *social* duties, of private content, and public concord.

*The body*, he observes, *is not one member, but many*, to each of which some peculiar and needful office is assigned ; so that the foot, though placed in the lowest order, and destined to serve on the very ground

has no reason to reckon itself a worthless outcast; or to say, *Because I am not the head, I am not of the body*. Neither has the *head*, in its exalted station, and amidst its honorable functions, any cause to despise the inferior limbs; or to say with contempt and self-sufficiency, *I have no need of you*. If there were no feet, what would become of the locomotive faculty? or how could the body convey itself from one place to another? If there were no hands, what should we do for the instrument of action? or how could the animal frame be defended and accommodated? Nay, the parts *which seem to be less honorable*, are necessary. Even those which form the sediments, or throw off the dregs, are of importance to life and its comforts. Should those be obstructed in their action, the most raging torment ensues; and should the obstruction continue, death is the inevitable consequence. By this wise adjustment, *there is no schism in the body*, no separate or interfering ends pursued by the members, but the safety and support of each are the one undivided care of all.

Wise, wonderfully wise and eminently gracious, is the relation both of *spontaneous* and *involuntary* motion. Were this regulation reversed, what deplorable inconveniences would take place; nay, what unavoidable ruin must ensue! *Deplorable inconveniences*; if the discharge of the bowels, or evacuations of the bladder, were quite independent of our leave. *Unavoidable ruin*; if the action of the heart required the co-operation of our thoughts, or the business of respiration waited for the concurrence of our will.

The will, in some cases, has not so much as a single vote. In others, she *determines* and *commands* like an absolute sovereign; nor is there a monarch upon earth so punctually obeyed, as this queen of the human system. If she but intimate her pleasure, the spirits run, they fly to execute her orders; to stretch the arm, or close the hand; to furrow the brow with frowns, or dimple the cheek with smiles. How *easily*, as well as *punctually*, are these orders carried into execution!—To turn the screw, or work the lever, is laborious and wearisome; but we move the vertebræ, with all their

apparent chambers; we advance the leg, with the whole incumbent body; we rise from our seat; we spring from the ground; and, though much force is exerted, though a very considerable weight is raised, we meet with no difficulty, we complain of no fatigue.

That all this should be effected without any toil, and by a *bare act* of the will, is very surprising; but that these motions should be made, renewed, continued, even while we remain *entirely* ignorant of the *manner* in which they are performed, is beyond measure astonishing. Who can play even a *single* tune upon the piano, without learning the difference of the keys, or studying the rudiments of music? Impossible! Yet the mind of man touches *every* string of the human machine with the most masterly skill, though she knows nothing at all concerning the nature of her implements, or the process of her operation. We walk, we run, we leap, we throw ourselves into a variety of postures, and perform a multitude of motions, yet are utterly unable to say which nerve should be active; what muscle should swell, or what tendons approximate.

Put a German flute into the hand even of a sensible person; without a master to instruct him, he is at a loss to make the instrument speak; much less is he able to sink and soften the sound, to exalt and extend it just as he pleases. Yet we are self-taught in the method of *forming, regulating, and varying the voice*. Naturally, and with unpremeditated fluency, we give it the languishing cadence of sorrow, or the sprightly air of joy; the low faltering accents of fear, or the elated tone, and rapid sallies of anger. We can never sufficiently admire this multiplicity of animated organs; their finished form, and their faultless order. Yet I must confess myself struck with greater admiration at the power, the *truly mysterious* power and sway which the soul exercises over them. Ten thousand reins are put into her hand; she is not acquainted with their office, their use or their name; she has not learned so much as to distinguish one from another, nevertheless she manages all, conducts all without the least perplexity, or the least irregularity; rather with a promp-



titude, a consistency, and a speed, which nothing else can equal! Since health depends upon such a numerous assemblage of moving organs; since a single secretion stopped, may destroy the salutary state of the fluids, or a single wheel clogged, may put an end to the vital motion of the solids; with what holy *fear should we pass the time of our sojourning here below!* trusting for continual preservation, not merely to our own care, but to that omnipotent hand which formed the admirable machine: that the same hand which formed it, may superintend its agency and support its being.

When we consider the extensive contrivance and delicate mechanism—what plans of geometry have been laid; what operations of chemistry are performed; in a word, what miracles in art and elegance are executed, in order to furnish us with the necessary recruits and the several delights of life—is there not abundant reason to cry out with the inspired writer, “*How dear are thy counsels unto me, O God!*” thy counsels of creating wisdom! Thou hast not been sparing, but even lavish of thy indulgent designs! Thou hast omitted no expedient which might establish my ease, enlarge my comforts, and promote, yea complete, my bodily happiness! and is not this a most endearing obligation to *glorify the blessed God with our bodies, as well as with our spirits?*

The mechanism of our body; the connection and subserviency of all its parts to a common purpose; the exquisite contrivance of its organs, consisting of such various minute vessels, interwoven with wonderful art, have led anatomists of all ages, to acknowledge an infinite, wise and powerful MAKER. Among the most precious remains of antiquity, are those commentaries of Galen, written on the uses of the several parts of the human body, as hymns and offerings of praise to the great CREATOR.

Is it, indeed, otherwise conceivable how such consistency and harmony could have taken place in the different parts of our wonderful frame? How they could have been so exactly fitted to each other, and to the exterior objects which have an evident relation to them,



and the system they compose? Could the bones, which in all amount to four hundred, and the muscles still more numerous, and each so well disposed for motion, be adjusted without a superior knowledge in mechanics?—The eye, so admirably adapted to light, and appropriated to vision was it formed without a knowledge of optics? Or the ear, without the science of sounds?—Even our inclinations and passions, those sources of so much apparent ill, are by the Deity providentially rendered the means of our preservation, both as individuals and a race; and the selfish and social affections, like centripetal and centrifugal forces, conduct us with proper force, to the end intended by our MAKER to be produced by them. Yet the love of life and all its enjoyments, the fear of death and all its dreadful harbingers, and the social affections and all their endearments, would not have been sufficient security for our carrying on the *vital motions* with that constancy and uniformity necessary to the preservation of life, if thus engaged these motions had depended upon our will and choice. Wisdom would have deliberated concerning them with too much slowness, and volition would have executed often with a dangerous and fatal caprice. For, if the heart had been subject to the soul's authority, as much as the voluntary muscles are; if its motions could have been suspended or stopped with the same facility, death would then have cost us no painful pang; and whenever the body was tortured with disease, and the mind in anguish from grief or disappointment, a remedy so easily applied might have been too frequently resorted to, and yet more unfortunate beings might have rushed uncalled into the presence of HIM who stationed us for the wisest reasons here on earth. The preservation of life, therefore, greatly depends on our *vital motions* being entirely subject to the wise government of the Author of our lives, who charges HIMSELF with the immediate care of them and of us. All this, when attentively considered, must affect us with a sense of God's goodness; who, respecting the imbecility of man's nature, hath been pleased, by appetites and passions, to excite him to acts of self-preservation; where the violence of these might

have been hurtful, no less than the slowness and instability of reason, hath taken our safety under his more immediate direction. To attribute contrivances like these, and even understanding itself, to unintelligent causes, rather than to the all-wise PARENT OF NATURE, seems an incomprehensible perversion of reason and philosophy. That mind must be strongly prepossessed and bewildered with false science, which rather seeks for the cause of these involuntary motions in dead matter, organization, chance, necessity, something that, without knowledge or power, acts wisely and powerfully, than in the great *Fountain of power, wisdom and animation*.

If chance could be supposed to produce a regular determinate action, yet it is beyond the highest degree of credulity to suppose it could continue this regularity for any time. But we find it remains through life, independent of our will; and the same incessant vital actions have been carried on from the commencement of the world. It is thus that the sun's influence upon the earth has ever been regular. The production of trees, plants, and herbs ever uniform. Every seed produces now the same fruit it ever did. Every species of animal life is still the same. Could CHANCE continue *this regular arrangement*? Could any thing continue it, but the hand of an OMNIPOTENT CREATOR?

The human body is exalted to a most intimate and *personal union* with the Eternal SON OF GOD. He who decorated the heaven with stars, and crowned the stars with lustre; *He vouchsafed to be made flesh, and was found in fashion as a man*. Nay, this is even *now* the apparel of that divine and adorable PERSON.—He is clothed with our nature; he wears our very limbs; and appears in the dress of humanity, even at the right hand of God, and at the head of the heavenly hosts.

What think you of another privilege mentioned by the Apostle? "*Your bodies are the temple of the HOLY GHOST*." Not your souls only, but your very bodies are the shrine in which *the high and HOLY ONE, that inhabiteth eternity*, condescends to dwell. HE, who sitteth between the cherubim and walketh in the

circuit of the skies, is pleased to sanctify these earthly tenements for his own habitation. And is not this a *much grander* embellishment, than all their matchless contrivance and masterly workmanship?

Nor must I omit the dignity—the transcendent dignity, which is reserved for these systems of flesh at the *resurrection* of the just. They will then be refined and improved into the most perfect state, and the most beauteous form; surpassing whatever is resplendent and amiable in the most ornamental appearances of material nature. They will be purer than the unspotted firmament; brighter than the lustre of the stars; and, which exceeds all parallel, which comprehends all perfection, they will *be made like unto CHRIST's glorious body*; like that incomparably glorious body which the blessed JESUS wears in his celestial kingdom, and on his triumphant throne.

When we add all these *magnificent prerogatives* which are revealed in Scripture, to all those *inimitable niceties* which are displayed by anatomists, what thankfulness, what admiration can equal such a profusion of favors?

## NON-NATURALS.

By the term non-naturals, ancient physicians comprehend *air, meat and drink, sleep and watching, motion and rest, the retentions and excretions*, and the affections or passions of the mind; or, in other words, those principal matters which do not enter into the composition of the body, but which at the same time are indispensable to its existence.

*Observations on Diet.*—Unwholesome food, and irregularities of diet, occasion many diseases. There is no doubt but the whole constitution of the body may be changed by diet alone. Nor is an attention to diet necessary to the preservation of health only: it is likewise of importance in the cure of diseases. Every intention in the cure of many diseases, may be answered



by diet alone. Its effects, indeed, are not always so quick as those of medicine, but they are generally more lasting: besides, it is neither so disagreeable to the patient, nor so dangerous, as medicine, and is always more easily obtained.

Our intention here is not to inquire minutely into the nature and properties of the various kinds of aliment in use among mankind; nor to show their effects upon the different constitutions of the human body; but to mark some of the most pernicious errors which people are apt to fall into, with respect both to the quantity and quality of their food, and to point out their influence upon health.

It is not, indeed, an easy matter to ascertain the exact quantity of food proper for every age, sex, and constitution: but a scrupulous nicety here is by no means necessary. The best rule is to avoid all extremes.—Mankind were never intended to weigh and measure their food. Nature teaches every creature when it has enough; and the calls of thirst and hunger are sufficient to inform them when more is necessary.

Though *moderation* is the chief rule with regard to the quantity, yet the quality of food merits a farther consideration. There are many ways by which provisions may be rendered unwholesome. Bad seasons may either prevent the ripening of grain, or damage it afterwards. These, indeed, are the acts of Providence, and we must submit to them; but surely no punishment can be too severe for those who suffer provisions to spoil by hoarding them, on purpose to raise the price, or who promote their own interest by adulterating the necessities of life.\*

Animal as well as vegetable food may be rendered unwholesome by being kept too long. All animal substances have a constant tendency to putrefaction; and when that has proceeded too far, they not only become

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\*The poor, indeed, are generally the first who suffer by unsound provisions; but the lives of the laboring poor are of great importance to the state: besides, diseases occasioned by unwholesome food often prove infectious, by which means they reach persons in every station. It is, therefore, the interest of all to take care that no spoiled provisions of any kind be exposed to sale.



offensive to the senses, but hurtful to health. Diseased animals, and such as die of themselves, ought never to be eaten.

Animals which feed grossly, as tame ducks, hogs, &c., are neither so easily digested, nor afford such wholesome nourishment as others. No animal can be wholesome which does not take sufficient exercise. Most of our stalled cattle are crammed with gross food, but not allowed exercise nor free air; by which means they indeed grow fat, but their juices, not being properly prepared or assimilated, remain crude, and occasion indigestions, and oppression of the spirits, in those who feed upon them.

Animals are often rendered unwholesome by being over-heated. Excessive heat causes a fever, exalts the animal salts, and mixes the blood so intimately with the flesh, that it cannot be separated. For this reason, butchers should be severely punished who overdrive their cattle. No person would choose to eat the flesh of an animal which had died in a high fever; yet that is the case with all over-drove cattle; and the fever is often raised even to the degree of madness.

But this is not the only way by which butchers render meat unwholesome. The abominable custom of filling the cellular membrane of animals with air, in order to make them appear fat, is every day practised.—This not only spoils the meat, and renders it unfit for keeping, but is such a dirty trick, that the very idea of it is sufficient to disgust a person of any delicacy at every thing which comes from the shambles. Who can bear the thought of eating meat which has been blown up with air from the lungs of a fellow, perhaps laboring under the very worst of diseases?

*Salted animal food.*—Animal food was surely designed for man, and with a proper mixture of vegetables, it will be found the most wholesome; but to eat beef, mutton, pork, fish, and fowl, twice or thrice a day, is certainly too much. All who value health ought to be contented with making one meal of animal food in

twenty-four hours, and this ought to consist of one kind only.

*Vegetable Diet.*—The most obstinate scurvy has often been cured by a vegetable diet; nay, milk alone will frequently do more in that disease than any medicine. Hence it is evident, that if vegetables and milk were more used in diet, we should have less scurvy, and likewise fewer inflammatory fevers. Fresh vegetables, indeed, come to be daily more used in diet; this laudable practice we hope will continue to gain ground.

*Aliments.*—Our aliment ought neither to be too moist nor too dry. Moist aliment relaxes the solids, and renders the body feeble. Thus we see females, who live much on tea and other watery diet, generally become weak and unable to digest solid food: hence proceed hysterics, and all their dreadful consequences. On the other hand, food that is too dry, disposes the body to inflammatory fevers, scurvies, and the like.

*Tea.*—Much has been said on the ill-effects of tea in diet. They are, no doubt, numerous; but they proceed rather from the imprudent use of it, than from any bad qualities in the tea itself. Tea is now the universal breakfast in this part of the world; but the morning is surely the most improper time of the day for drinking it. Most delicate persons, who, by-the-bye, are the greatest tea-drinkers, cannot eat any thing in the morning. If such persons, after fasting ten or twelve hours, drink four or five cups of green tea without eating almost any bread, it must hurt them. Good tea, taken in a moderate quantity, not too strong, nor too hot, nor drank upon an empty stomach, will seldom do harm; but if it be bad, which is often the case, or substituted in the room of solid food, it must have many ill effects.

*Cookery.*—The arts of cookery render many things unwholesome, which are not so in their own nature.—

By jumbling together a number of different ingredients, in order to make a poignant sauce, or rich soup, the composition proves almost a poison. All high seasoning, pickles, &c., are only incentives to luxury, and never fail to hurt the stomach. It were well for mankind, if cookery, as an art, were entirely prohibited. Plain roasting or boiling is all that the stomach requires.—These alone are sufficient for people in health, and the sick have still less need of a cook.

The liquid part of our aliment likewise claims our attention. Water is not only the basis of most liquors, but also composes a great part of our solid food. Good water must, therefore, be of the greatest importance in diet. The best water is that which is most pure, and free from any mixture of foreign bodies. Water takes up parts of most bodies with which it comes into contact; by this means it is often impregnated with metals or minerals of a hurtful or poisonous nature. Hence the inhabitants of some hilly countries have peculiar diseases, which in all probability proceed from the water. Thus the people who live near the Alps in Switzerland, and the inhabitants of the Peak of Derby, in England, have large tumors or wens on their necks (bronchocele.)\* This disease is generally imputed to the snow-water; but there is more reason to believe it is owing to the minerals in the mountains through which the waters pass.†

*Water.*—When water is impregnated with foreign bodies, it generally appears by its weight, color, taste,

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\*Bronchocele, or goitre, was very common in Pittsburgh, twenty years since. I have been informed by a medical gentleman, that almost every female in the place was affected with it at that time. It has gradually disappeared of late years, and a case is now rarely met with. He attributes its disappearance to the influence of the smoke of bituminous coal, of which immense quantities are consumed in that city.

†This long controverted opinion, very early broached by Dr. Buchan, relative to the cause of these tumors, (bronchocele, or goitres, &c) among the inhabitants of certain mountainous districts, is now greatly strengthened, in fact corroborated, by a curious history of the disease, in a letter from Dr. Alexander Coventry, President of the Medical Society of the State of New York, to the editors of the New York Medical and Physical Journal for June, 1824, No. 10. See also "NEW DOMESTIC MEDICAL MANUAL," under BRONCHOCELE.



smell, heat or some other sensible quality. Our business, therefore, is to choose such water, for common use, as is lightest, and without any particular color, taste, or smell. In most places the inhabitants have it in their power to make choice of their water, and few things would contribute more to health than a due attention to this article. But mere indolence often induces people to make use of the water that is nearest to them, without considering its qualities.

Before water is brought into great towns, the strictest attention ought to be paid to its qualities, as many diseases may be occasioned or aggravated by bad water; and when once it has been procured at a great expense, people are unwilling to give it up.

The common methods of rendering water clear by filtration; or soft, by exposing it to the sun and air, are so generally known that it is unnecessary to spend time in explaining them. We shall only, in general, advise all to avoid waters which stagnate long in small lakes, ponds, or the like, as such waters often become putrid, by the corruption of animal and vegetable bodies with which they abound. Even cattle frequently suffer by drinking, in dry seasons, water which has stood long in small reservoirs, without being supplied by springs, or freshened with showers. All wells ought to be kept clean, and to have a free communication with the air.

*Fermented Liquors.*—Notwithstanding fermented liquors have been exclaimed against by many writers, they still continue to be the common drink of almost every person who can afford them; we shall rather endeavor to assist people in the choice of these liquors, than pretend to condemn what custom has so firmly established. It is not the moderate use of sound fermented liquors which hurts mankind: it is excess, and using such as are ill-prepared or vitiated.

Fermented liquors, which are too strong, hurt digestion; and the body is so far from being strengthened by them, that it is weakened and relaxed. Many imagine that hard labor could not be supported without drinking strong liquors; this is a very erroneous notion.



Men who never taste strong liquors are not only able to endure more fatigue, but also live much longer, than those who use them daily. But suppose strong liquors did enable a man to do more work, they must nevertheless waste the powers of life, and occasion premature old age. They keep up a constant fever, which exhausts the spirits, and disposes the body to numberless diseases.

But fermented liquors may be too weak as well as too strong : when that is the case, they must either be drank new, or they become sour and dead : when such liquors are drank new, the fermentation not being over, they generate air in the bowels, and occasion flatulences ; and when kept till stale, they turn sour on the stomach, and hurt digestion. For this reason, all malt liquors ought to be of such strength as to keep till they be ripe, and then they should be used. When such liquors are kept too long, though they should not become sour, yet they generally contract a hardness which renders them unwholesome.

All families, who can, ought to prepare their own liquors. Since preparing and vending of liquors became one of the most general branches of business, every method has been tried to adulterate them. The great object both to the makers and venders of liquor is, to render it intoxicating, and give it the appearance of age. But it is well known that this may be done by other ingredients than those which ought to be used for making it strong. It would be imprudent even to name those things which are daily made use of to render liquors heady. Suffice it to say that the practice is very common, and that all ingredients used for this purpose are of a narcotic or stupefactive quality. But as all opiates are poisonous, it is easy to see what must be the consequence of their general use. Though they do not kill suddenly, yet they hurt the nerves, relax and weaken the stomach, and spoil the digestion.

Were fermented liquors faithfully prepared, kept to a proper age, and used in moderation, they would prove real blessings to mankind. But, while they are ill-pre-

pared, various ways adulterated, and taken to excess, they must have many pernicious effects.

*Home baked Bread.*—We would recommend it to families, not only to prepare their own liquors, but likewise their bread. Bread is so necessary a part of diet, that too much care cannot be bestowed in order to have it sound and wholesome. For this purpose, it is not only necessary that it be made of good grain, but likewise properly prepared, and kept free from all unwholesome ingredients. This, however, we have reason to believe, is not always the case with bread prepared by those who make a trade of vending it. Their object is rather to please the eye than to consult the health. The best bread is that which is neither too coarse nor too fine; well fermented, and made of Indian corn, or wheat flour, or rather of wheat and rye mixed together.

*Plain rules to be observed in the selection of Aliments.*—1. Persons whose solids are weak and relaxed ought to avoid all viscid food, or such things as are difficult of digestion. Their diet, however, ought to be nourishing; and they should take sufficient exercise in the open air.

2. Such as abound with blood should be sparing in the use of every thing that is highly nourishing, as fat meat, rich wines, strong ales, and such like. Their food should consist chiefly of bread and other vegetable substances; and their drink ought to be water, whey, or small beer.

3. Fat people should not eat freely of oily nourishing diet. They ought frequently to use radish, garlic, spices, or such things as are heating and promote perspiration and urine. Their drink should be water, coffee, tea, or the like; and they ought to take much exercise and little sleep. Those who are too lean must follow an opposite course.

4. Such as are troubled with acidities, or whose food is apt to sour on the stomach, should live much on

animal food; and those who are afflicted with hot alkaline eructations, ought to use a diet consisting chiefly of acid vegetables.

5. People who are affected with the gout, hypochondriac or hysteric disorders, ought to avoid all flatulent food, every thing that is viscid, or hard of digestion, all salted or smoke-dried provisions, and whatever is austere, acid, or apt to turn sour on the stomach. Their food should be light, spare, cool, and of an opening nature.

6. The diet ought not only to be suited to the age and constitution, but also to the manner of life: a sedentary or studious person should live more sparingly than one who labors hard without doors. Many kinds of food will nourish a peasant very well, which would prove almost indigestible to a citizen; and the latter will live upon a diet on which the former would starve.

7. Diet ought not to be too uniform. The constant use of one kind of food might have some bad effects. Nature teaches us this, by the great variety of aliment which she has provided for man, and likewise by giving him an appetite for different kinds of food.

8. Those who labor under any particular disease, ought to avoid such aliments as have a tendency to increase it: for example, a gouty person should not indulge in rich wines, strong soups, or gravies, and should avoid all acids. One who is troubled with the gravel ought to shun all austere and stringent aliments; and those who are scorbutic should be sparing in the use of salted provisions, &c.

*General Observations on Diet, Long Fasting, and Regularity.*—It has always been an established rule with respect to diet, that the softer and milder kinds of diet are best adapted for children and young subjects generally; that for grown up people the more substantial is necessary; and with regard to old people, they should gradually, as they advance towards their climax, lessen the quantity of solid food, while they increase that of their drink, both of the diluent and cordial kind;



taking care, however, that, in thus accommodating "pliant nature," that slow must be the change:—

"And stage by stage—  
Slow as the stealing progress of the year."

For nature looks up to custom as a kind of hereditary right to which she is entitled by long possession, and although she may be taught to relinquish her pretensions to it, this must never be attempted by sudden changes, or hasty transitions either of one kind or other.

It is not only necessary for health that our diet be wholesome, but also that it be taken at regular periods. Some imagine long fasting will atone for excess; but this, instead of mending the matter, generally makes it worse. When the stomach and intestines are over distended with food, they lose their proper tone, and by long fasting they become weak, and inflated with wind. Thus either gluttony or fasting destroys the powers of digestion.

Long fasting is extremely hurtful to young people; it not only vitiates their humors, but prevents their growth. Nor is it less injurious to the aged. Most persons in the decline of life, are afflicted with wind: this complaint is not only increased, but even rendered dangerous, and often fatal, by long fasting. Old people, when their stomachs are empty, are frequently seized with giddiness, head-aches, and faintness. These complaints may generally be removed by a piece of bread and a glass of wine, or taking any other solid food; which plainly points out the method of preventing them.

It is more than probable, that many of the sudden deaths, which happen in the advance periods of life, are occasioned by fasting too long, as it exhausts the spirits, and fills the bowels with wind: we would, therefore, advise people, in the decline of life, never to allow their stomachs to be too long empty. Many people take nothing but a few cups of tea and a little bread, from nine o'clock at night till two or three the next afternoon. Such may be said to fast almost three-fourths of their



time. This can hardly fail to ruin the appetite, and fill the bowels with wind; all which might be prevented by a solid breakfast.

*Suppers and Breakfasts Contrasted.*—It is a very common practice to eat a light breakfast and a heavy supper. This custom ought to be reversed. When people sup late, their supper should be very light; but the breakfast ought always to be solid. If any one eats a light supper, goes soon to bed, and rises betimes in the morning, he will be sure to find an appetite for his breakfast, and he may freely indulge it.

The strong and healthy do not indeed suffer so much from fasting as the weak and delicate; but they run great hazard from its opposite, viz. repletion. Many diseases, especially fevers, are the effect of plethora, or too great fullness of the vessels. Strong people, in high health, have generally a great quantity of blood and other humors. When these are suddenly increased by an over-charge of rich and nourishing diet, the vessels become too much distended, and obstructions and inflammations ensue. Hence so many people are seized with inflammatory and eruptive fevers, apoplexies, &c. after a feast or debauch.

All great and sudden changes in diet are dangerous. What the stomach has been long accustomed to digest, through less wholesome, will better agree with it than food of a more salutary nature to which it has not been used. When, therefore, a change becomes necessary, it ought always to be made gradually; a sudden transition from a poor and low to a rich and luxurious diet, or the contrary, might so disturb the functions of the body as to endanger health, or even to occasion death itself.

When we recommend regularity in diet, we would not be understood as condemning every small deviation from it. It is next to impossible for people at all times to avoid some degree of excess, and living too much by rule might make even the smallest deviation dangerous. It may, therefore, be prudent to vary a little, sometimes taking more, sometimes less, than the usual quantity of

meat and drink, provided always that a due regard be had to moderation.

The details which some writers have entered into respecting the supposed qualities of every article of food and drink, as well as the proper quantities of each, appear to me just as trifling as the minuteness of the physician who inserted in his prescription how many grains of salt should be eaten with an egg. Every man's experience of what he has found to agree or disagree with him, is a much more unerring guide than whimsical calculations of the difference between the mucilage of a carrot and a parsnip, or between the jelly contained in a leg and shoulder of mutton. But while I point out the folly of extreme solicitude in such matters, I am far from advising people to eat and drink, without any choce or restraint, whatever falls in their way. This would be inconsistent with the rules I have already laid down. Rational enjoyment of the gifts of nature, is the happy medium between boundless indulgence and frivolous or unnecessary self-denial.

Such as have a faulty circulation through the lungs, the consequence of pulmonary or other complaints, ought to eat very little at a time, because the quantity of chyle being increased must obviously render that circulation more uneasy. The great secret then for consumptive and asthmatic patients in particular, and upon which their cure principally depends, is to take their food in small quantities at a time. It happens, however, rather unfortunately for asthmatic patients, that their desire for food is considerably increased; in consequence of which, sanguification is but imperfectly performed, they become what is termed leuco phlegmatic, that is they acquire a dropsical tendency. The choice, therefore, as well as the quantity, of diet, is of great importance to those who have weak lungs, as well as to persons generally who are of delicate constitutions.

## AIR.

Unwholesome air is a very common cause of diseases. Few are aware of the danger arising from it.— People generally pay some attention to what they eat or drink, but seldom regard what goes into the lungs, though the latter proves often more suddenly fatal than the former.

Air, as well as water, takes up parts of most bodies with which it comes in contact, and is often so replenished with those of a noxious quality, as to occasion immediate death. But such violent effects seldom happen, as people are generally on their guard against them. The less perceptible influences of bad air prove more generally hurtful to mankind; we shall, therefore, endeavor to point out some of these, and to show whence the danger chiefly arises.

Air may become noxious many ways. Whatever greatly alters its degrees of heat, moisture, &c. renders it unwholesome. Very cold air obstructs the perspiration, occasions rheumatisms, coughs, and catarrhs, with other diseases of the throat and breast. Air that is too moist destroys the elasticity or spring of the solids, induces phlegmatic or lax constitutions, and disposes the body to intermitting fevers, &c.

Wherever great numbers of people are crowded into one place, if the air has not a free circulation it soon becomes unwholesome. Hence it is that delicate persons are so apt to turn sick or faint in crowded churches, assemblies, or any place where the air is injured by breathing, fires, candles, or the like.

In great cities, so many things tend to contaminate the air that it is no wonder it proves so fatal to the inhabitants. The air in cities is not only breathed repeatedly over, but is likewise loaded with sulphur, smoke, and other exhalations, besides the vapors continually arising from innumerable putrid substances, as dung-hills and slaughter-houses. All possible care should be taken to keep the streets of large towns open and wide, that the air may have a free current through them. They ought likewise to be kept very clean. Nothing

tends more to pollute and contaminate the air of a city than dirty streets.

It is very common to have church-yards in the middle of populous cities. Whether this be the effect of ancient superstition, or owing to the increase of such towns, is a matter of no consequence. Whatever gave rise to the custom, it is a bad one. It is habit alone which reconciles us to these things; by means of which the most ridiculous, nay pernicious customs, often become sacred. Certain it is, that thousands of putrid bodies, so near the surface of the earth, in a place where the air is confined, cannot fail to taint it; and that such air, when breathed into the lungs, must occasion disease.\*

Burying within churches is a practice still more detestable. The air in churches is seldom good, and the effluvia from decaying bodies must render it still worse. They are seldom open above once a week, are never ventilated by fires nor open windows, and rarely kept clean. This occasions that damp, musty, unwholesome smell which one feels upon entering a church, and renders it a very unsafe place for the weak and valetudinary. These inconveniencies might, in a great measure, be obviated by prohibiting all persons from burying within churches, by keeping them clean, and permitting a stream of fresh air to pass frequently through them, by opening opposite doors and windows.†

Wherever air stagnates long, it becomes unwholesome. Hence the unhappy persons confined in jails not only contract malignant fevers themselves, but often communicate them to others. Nor are many of the holes, for we cannot call them houses, possessed by the poor in great towns, much better than jails. These low dirty habitations are the very lurking places of bad air and contagious diseases. Such as live in them seldom enjoy good health; and their children commonly die young. In the choice of a house, those who have it in

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\* In most eastern countries it was customary to bury the dead at some distance from any town. As this practice obtained among the Jews, the Greeks, and also the Romans, it is strange that the western parts of Europe should not have followed their example in a custom so truly laudable.

† One cannot pass through a large church or cathedral, even in summer, without feeling quite chilly.



their power ought always to pay the greatest attention to open free air.

The various methods which luxury has invented to make houses close and warm, contribute not a little to render them unwholesome. No house can be wholesome, unless the air has a free passage through it. For which reason, houses ought daily to be ventilated by opening opposite windows, and admitting a current of fresh air into every room. Beds, instead of being made up as soon as people rise out of them, ought to be turned down, and exposed to the fresh air from the open windows through the day. This would expel any noxious vapour, and could not fail to promote the health of the inhabitants.

In hospitals, jails, and ships, where that cannot be conveniently done, ventilators should be used. The method of expelling foul, and introducing fresh air, by means of ventilators, is a most salutary invention, and is, indeed, the most useful of all modern medical improvements. It is capable of universal application, and is fraught with numerous advantages, both to those in health and sickness. In all place, where numbers of people are crowded together, ventilation becomes absolutely necessary.

Air which stagnates in mines, wells, and cellars, is extremely deleterious and fatal to life; and ought to be avoided as the most deadly poison. It often kills almost as quick as lightning. For this reason people should be very cautious in opening cellars that have been long shut, or going down into deep wells or pits, especially if they have been kept closely covered.\*

Many people who have splendid houses, choose to sleep in small apartments. This conduct is very imprudent. A bedchamber ought always to be well aired; as it is generally occupied in the night only, when all doors and windows are shut. If a fire be kept in it, the danger from a small room becomes still greater. Num-

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\* We have daily accounts of persons who lose their lives by going down into deep wells and other places where the air stagnates: all these accidents might be prevented by only letting down a lighted candle before them, and stopping when they perceive it go out, yet this precaution, simple as it is, is seldom used.

bers have been stifled when asleep by a fire in a small apartment, which is always hurtful.

Those who are obliged, on account of business, to spend the day in close towns, ought, if possible, to sleep in the country. Breathing free air in the night will, in some measure, make up for the want of it through the day. This practice would have a greater effect in preserving the health of citizens than is commonly imagined.

Delicate persons ought, as much as possible, to avoid the air of great towns. It is peculiarly hurtful to the asthmatic and consumptive. Such persons should avoid cities as they would the plague. The hypochondriac are likewise much hurt by it. I have often seen persons so much afflicted with this malady while in town, that it seemed impossible for them to live, who, upon being removed to the country, were immediately relieved. The same observation holds with regard to nervous and hysteric women. Many people, indeed, have it not in their power to change their situation in quest of better air. All we can say to such persons is, that they should go as often abroad into the open air as they can, that they should admit fresh air frequently into their houses, and take care to keep them very clean.

Surrounding houses too closely with plantations or thick woods, likewise tends to render the air unwholesome. Wood not only obstructs the free current of the air, but sends forth great quantities of moist exhalations, which render it constantly damp. Wood is very agreeable at a proper distance from a house, but should never be planted too near it, especially in a flat country.

Houses situated in low marshy countries, or near large lakes of stagnating water, are likewise unwholesome. Waters which stagnate not only render the air damp, but load it with exhalations, which produce the most dangerous and fatal diseases. Those who are obliged to inhabit marshy countries, ought to make choice of the driest situations they can find, to live generously, and to pay the strictest regard to cleanliness.

If fresh air be necessary for those in health, it is still more so for the sick, who often lose their lives for want

of it. The notion that sick people must be kept very hot, is so common, that one can hardly enter the chamber where a patient lies, without being ready to faint, by reason of the hot suffocating smell. How this must effect the sick any one may judge. No medicine is so beneficial to the sick as fresh air. It is the most reviving of all cordials, if it be administered with prudence. We are not, however, to throw open doors and windows at random upon the sick. Fresh air is to be let into the chamber gradually, and, if possible, by opening the windows of some other apartment.

The air of a sick person's chamber may be greatly freshened, and the patient much revived, by sprinkling the floor frequently with vinegar, juice of lemon, or any other strong vegetable acid.

In places where numbers of sick are crowded into the same house, or, which is often the case, into the same apartment, the frequent admission of fresh air becomes absolutely necessary. Infirmarys, and hospitals, are often rendered so noxious, for want of proper ventilation, that the sick run more hazard from them than from the disease. This is particularly the case when infectious diseases prevail.

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### EXERCISE.

Many people look at the necessity man is under, of eating his bread by labor, as a curse. Be this as it may, it is evident from the structure of the body, that exercise is not less necessary than food for the preservation of health: those who labor for daily bread, are not only the most healthy, but generally the most happy part of mankind. Industry seldom fails to place them above want, and activity serves them instead of physic. This is peculiarly the case with those who live by the culture of the ground. The great increase of inhabitants in infant colonies, and the longevity of such as follow agriculture every where, evidently prove it to be the most healthful as well as the most useful employment.

The love of activity shows itself very early in man. So strong is this principle, that the healthy youth cannot be restrained from exercise, even by the fear of punishment. Our love of motion is surely a strong proof of its utility. Nature implants no disposition in vain. It seems to be a catholic law through the whole animal creation, that no creature without exercise, should enjoy health, or be able to find subsistence. Every creature, except man, takes as much of it as is necessary. He alone, and such animals as are under his direction, deviate from this original law, and they suffer accordingly.

Inactivity never fails to dispose the body to innumerable diseases. When the solids are relaxed, neither the digestion nor any of the secretions can be duly performed.

Glandular obstructions, now so common, generally proceed from inactivity. These are the most obstinate of maladies. So long as the liver, kidneys, and other glands, duly perform their functions, health is seldom impaired: but when they fail, nothing can restore it.—Exercise is almost the only cure we know for glandular obstructions: indeed, it does not always succeed as a remedy; but there is reason to believe that it would seldom fail to prevent these complaints, were it used in due time. One thing is certain, that amongst those who take sufficient exercise, glandular diseases are very little known; whereas the indolent and inactive are very seldom free from them.

Weak nerves are the constant companions of inactivity. Nothing but exercise and open air can brace and strengthen the nerves, or prevent the endless train of diseases which proceed from a relaxed state of these organs. We seldom hear the active or laborious complain of nervous diseases; these are reserved for the sons of ease and affluence. Many have been completely cured of these disorders by being reduced, from a state of opulence, to labor for their daily bread. This plainly points out the sources from whence nervous diseases flow, and the means by which they may be prevented.



It is absolutely impossible to enjoy health where the perspiration is not duly carried on; but that can never be the case where exercise is neglected. Exercise alone would prevent many of those diseases which cannot be cured, and would remove others where medicine proves ineffectual.

A late author,\* in his excellent treatise on health, says, that the weak and valetudinary ought to make exercise a part of their religion. We would recommend this, not only to the weak and valetudinary, but to all whose business does not oblige them to take sufficient exercise, as sedentary artificers,† shopkeepers, and studious persons. Such ought to use exercise as regularly as they take food. This might generally be done without any interruption to business or real loss of time.

No piece of indolence hurts the health more than the modern custom of lying a-bed too long in the morning. This is the general practice in great towns. The inhabitants of cities seldom rise before eight or nine o'clock; but the morning is undoubtedly the best time for exercise, while the stomach is empty, and the body refreshed with sleep. Besides, the morning air braces and strengthens the nerves, and, in some measure, answers the purpose of a cold bath. Let any one who has been accustomed to lie a-bed till eight or nine o'clock, rise by six or seven, spend a couple of hours in walking, riding, or any active diversion without doors, and he will find his spirits cheerful and serene through

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\*Cheyne.

†Sedentary occupations ought chiefly to be followed by women. They bear confinement much better than men, and are fitter for every kind of business which does not require much strength. It is ridiculous enough to see a lusty fellow making pins, needles, or watch-wheels, while many of the laborious parts of husbandry are carried on by the other sex. The fact is, we want men for laborious employments, while one half of the other sex are rendered useless for want of occupations suited to their strength. Were girls bred to mechanical employments, we should not see such numbers of them prostitute themselves for bread, nor find such a want of men for the important purposes of navigation, agriculture, &c. An eminent silk manufacturer told me, that he found women to answer better for that purpose than men; and that he had lately taken a great many girls apprentices as silk-weavers. I hope this example will be followed by many others.

the day, his appetite keen, and his body braced and strengthened. Custom soon renders early rising agreeable, and nothing contributes more to the preservation of health.

The inactive are continually complaining of pains of the stomach, flatulencies, and indigestion. These complaints, which pave the way to many others, are not to be removed by medicines. They can only be cured by a vigorous course of exercise, to which indeed they seldom fail to yield.

Exercise, if possible, ought always to be taken in the open air. When that cannot be done, various methods may be contrived for exercising the body within doors, as the dumb bell, dancing, fencing, &c. It is not necessary to adhere strictly to any particular kind of exercise. The best way is to take them by turns, and to use that longest which is most suitable to the strength and constitution. Those kinds of exercise which give action to most of the bodily organs, are always to be preferred, as walking, running, riding, digging, rubbing furniture, and such like.

It is much to be regretted, that active and manly diversions are so little practised. Diversions make people take more exercise than they otherwise would do, and are of the greatest service to such as are not under the necessity of laboring for their bread. As active diversions lose ground, those of a sedentary kind seem to prevail. Sedentary diversions are of no other use but to consume time. Instead of relieving the mind, they often require more thought than either study or business. Every thing that induces people to sit still, unless it be some necessary employment, ought to be avoided.

The diversions which afford the best exercise are hunting, shooting, playing at cricket, hand-ball, &c.—These exercise the limbs, promote perspiration, and the other secretions. They likewise strengthen the lungs, and give firmness and agility to the whole body.

Such as can, ought to spend two or three hours a day on horseback, those who cannot ride, should employ the same time in walking. Exercise should never

be continued too long. Over-fatigue prevents the benefit of exercise, and instead of strengthening the body tends to weaken it.

Every man should lay himself under some sort of necessity to take exercise. Indolence, like other vices, when indulged, gains ground, and at length becomes agreeable. Hence many who were fond of exercise in the early part of life, become quite averse from it afterwards. This is the case with most hypochondriac and gouty people, which renders their diseases in a great measure incurable,

In some countries laws have been made, obliging every man, of whatever rank, to learn some mechanical employment. Whether such laws were designed for the preservation of health, or the encouragement of manufacture, is a question of no importance. Certain it is, that if gentlemen were frequently to amuse and exercise themselves in this way, it might have many good effects. They would at least derive as much honor from a few masterly specimens of their own workmanship, as from the character of having ruined most of their companions by gaming or drinking. Besides, men of leisure, by applying themselves to the mechanical arts, might improve them to the great benefit of society.

Indolence not only occasions diseases, and renders men useless to society, but promotes all manner of vice. To say a man is idle, is little better than to call him vicious. The mind, if not engaged in some useful pursuit, is constantly in quest of ideal pleasures, or impressed with the apprehension of some imaginary evil. From these sources proceed most of the miseries of mankind. Certainly man was never intended to be idle. Inactivity frustrates the very design of his creation; whereas an active life is the best guardian of virtue, and the greatest preservative of health.

It is indeed evident, that the love of motion, as well as the love of food, so observable in every living creature from the moment of its birth, are wisely designed by nature as the means of its preservation. The indo-

lent man is therefore a rebel to her laws, and will certainly provoke her severest punishment. In vain does he hope for enjoyment in the lap of sloth; its chilling influence poisons the source of every pleasure, and not only invites disease, but renders it almost incurable.

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### SLEEP.

The benefits resulting from sleep are sufficiently obvious, from the effects it produces. It restores both the powers of the mind and body, when exhausted by exercise, giving vigor to the one, and restoring the other to its accustomed alacrity. By means of sleep, the muscles are again rendered active and moveable, after they have become wearied, rigid, painful, and trembling, from hard labor and severe exercise. It moderates the quickness of the pulse, which usually increases at night, and brings it back to its morning standard. It seems also to assist digestion of aliment—it diminishes both excretions and secretions; and renders the fluids thicker than otherwise they would be, particularly in a body endowed with much sensibility or mobility. Sleep, therefore, is not only useful, but absolutely indispensable, for the preservation of life and health; and it contributes most essentially to the alleviation, as well as to the total removal of disease. The want of it is equally hurtful, and in many different ways, to the nervous system. Its absence renders the external as well as internal organs of sense, and those of every kind of motion, unfit for the performance of their offices.

Sleep, therefore, like diet, ought to be duly regulated. Too little sleep weakens the nerves, exhausts the spirits, and occasions diseases; and too much renders the mind dull, the body gross, and disposes to apoplexies, lethargies, and other complaints of a similar nature.—A medium ought therefore to be observed; but this is not easy to fix. Children require more sleep than grown persons, the laborious than the idle, and such as eat and drink freely, than those who live abstemiously.



Besides, the real quantity of sleep cannot be measured by time; as one person will be more refreshed by five or six hours sleep than another by eight or ten.

Children may always be allowed to take as much sleep as they please; but for adults, six or seven hours is certainly sufficient, and no one ought to exceed eight. Those who lie in bed more than eight hours may slumber, but they can hardly be said to sleep; such generally toss and dream away the fore part of the night, sink to rest towards morning, and dose till noon. The best way to make sleep sound and refreshing is to rise betimes. The custom of lying in bed for nine or ten hours, not only makes the sleep less refreshing, but relaxes the solids, and greatly weakens the constitution.

Nature points out night as the proper season for sleep. Nothing more certainly destroys the constitution than night-watching. It is a great pity that a practice so destructive to health should be so much in fashion. How quickly the want of rest in due season will blast the most blooming complexion, or ruin the best constitution, is evident from the ghastly countenances of those who, as the phrase is, turn day into night, and night into day.

*To procure refreshing Sleep.*—To make sleep refreshing, the following things are requisite: First, to take sufficient exercise in the open air; to avoid strong tea or coffee; next, to eat a light supper; and, lastly, to lie down with a mind as cheerful and serene as possible.

It is certain that too much exercise will prevent sleep, as well as too little. We seldom, however, hear the active and laborious complain of restless nights. It is the indolent and slothful who generally have these complaints. Is it any wonder that a bed of down should not be refreshing to a person who sits all day in an easy chair? A great part of the pleasure of life consists in alternate rest and motion; but they who neglect the latter can never relish the former. The laborer enjoys more true luxury in plain food and sound sleep, than is to be found in sumptuous tables and pillows, where exercise is wanting.

That light suppers cause sound sleep, is true even to a proverb. Many persons, if they exceed the least at that meal, are sure to have uneasy nights; and, if they fall asleep, the load and oppression on their stomach and spirits occasion frightful dreams, broken and disturbed repose, or the night-mare. Were the same persons to go to bed with a light supper, or sit up till that meal was pretty well digested, they would enjoy sound sleep, and rise refreshed and cheerful. There are indeed some people who cannot sleep unless they have eat some solid food at night; but this does not imply the necessity of a heavy supper: besides, these are generally persons who have accustomed themselves to this method, and who do not take a sufficient degree of exercise.

Nothing more certainly disturbs our repose than anxiety. When the mind is not at ease, one seldom enjoys sound sleep. This greatest of human blessings flies the wretched and visits the happy, the cheerful and the gay. This is a sufficient reason why every man should endeavor to be as easy in his mind as possible when he goes to rest. Many by indulging grief and anxious thought, have banished sound sleep so long, that they could never afterwards enjoy it.

Sleep, when taken in the fore part of the night, is generally reckoned the most refreshing. Whether this be the effect of habit or not, is hard to say; but as most people are accustomed to go early to bed when young, it may be presumed that sleep, at this season, will prove most refreshing to them ever after. Whether the fore part of the night be best for sleep or not, surely the fore part of the day is fittest both for business and amusement. I hardly ever knew an early riser who did not enjoy a good state of health.\*

Early rising is the natural consequence of going to bed early; and this habit implies sobriety, good order, and an exemption from many fashionable follies ex-

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\*Men of every occupation, and in every situation of life, have lived to a good old age; nay some have enjoyed this blessing whose plan of living was by no means regular: but it consists with observation, that all very old men have been early risers. This is the only circumstance attending longevity to which I never knew an exception.

remely prejudicial to health. The man, who accustoms himself to go to bed at an early hour, can seldom join in the revels of Bacchus, or what are improperly called the amusements of the gay world. His rest is not disturbed by the effects of unseasonable luxury. He knows, that temperance, moderate exercise, composure of mind, and external tranquility, are the best opiates. His slumbers are sound and refreshing. The waste of spirits on the preceding day is fully repaired. Every muscle, every fibre, every nerve has regained its proper tone. He rises with cheerfulness and vigor to breathe the morning air, and to enter upon the duties of the day. In short, an attention to this single point of going to bed early, and of rising betimes, will be found to supersede a variety of other precepts, and may be justly called the *golden rule* for the attainment of health and long life.

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## CLOTHING.

The clothing ought to be suited to the climate. Custom has, no doubt, a very great influence in this article; but no custom can ever change the nature of things so far, as to render the same clothing fit for an inhabitant of Nova Zembla and the island of Jamaica. It is not indeed necessary to observe an exact proportion between the quantity of clothes we wear, and the degree of latitude which we inhabit; but, at the same time, proper attention ought to be paid to it, as well as to the openness of the country, the frequency and violence of storms, &c.

In youth, while the blood is hot and the perspiration free, it is less necessary to cover the body with a great quantity of clothes; but in the decline of life, when the skin becomes rigid and the humors more cool, the clothing should be increased. Many diseases in the latter period of life proceed from a defect of perspiration: these may, in some measure, be prevented by a suitable addition to the clothing, or by wearing such as are bet-



ter calculated for promoting the discharge from the skin, as clothes made of cotton, flannel, and similar articles.

The clothing ought likewise to be suited to the season of the year. Clothing may be warm enough for summer, which is by no means sufficient for winter.—The greatest caution, however, is necessary in making these changes. We ought neither to put off our winter clothes too soon, nor to wear our summer ones too long. In this country, the winter often sets in very early with great rigor, and we have frequently cold weather even after the commencement of the summer months. It would likewise be prudent not to make the change all at once, but to do it gradually, and indeed the changes of apparel in this climate ought to be very inconsiderable, especially among those who have passed the meridian of life.\*

Clothes often become hurtful to the wearer by their being made subservient to the purposes of pride or vanity. Mankind in all ages seem to have considered clothes in this view; accordingly their fashion and figure have been continually varying, with very little regard either to health, the climate, or convenience; a farthingale, for example, may be very necessary in hot southern climates, but surely nothing can be more ridiculous in the cold regions of the north.

Even the human shape is often attempted to be mended by dress, and those who know no better believe that mankind would be monsters without its assistance. All attempts of this nature are highly pernicious. The most destructive of them in this country is that of squeezing the stomach and bowels into as narrow a compass as possible, to procure what is falsely called, a fine shape.† By this practice, the action of the stomach and

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\*That colds kill more than plagues, is an old observation; and, with regard to this country, it holds strictly true. Every person of discernment, however, will perceive, that most of the colds which prove so destructive are owing to imprudence in changing clothes. A few warm days in March or April induce us to throw off our winter garments, without considering that our most penetrating colds generally happen in the spring.

†This madness seems to have pervaded the minds of mothers in every age and country. Terence, in his comedy of the Eunuch, ridicules the Roman matrons for attempting to mend the shape of their daughters.



bowels, the motion of the heart and lungs, and almost all the vital functions, are obstructed. Hence proceed indigestions, syncopes or fainting fits, coughs, consumptions of the lungs, and other complaints so common among females.

[The use of *corsets* is the most prolific cause of curved spine, a disease of very common occurrence since the introduction of French fashions into America. Mr. Knox, in an essay written as far back as 1530, in investigating the nature of spinal affections, refers to the indiscretions in dress of females as a cause, and strenuously advises "the discontinuance of corsets, and other bandages calculated to disfigure the human frame." Their operation destroys entirely the natural symmetry and configuration of the female chest, rendering it round or oval, whereas it is properly truncated. Its parietes are pressed inwards on the contained viscera, impeding their functions, and in many instances exciting disorganization or alteration of structure. The lower portion of the sternum is pressed against the viscera, while the upper is rather projecting. In addition to the direct action of the corset in diminishing the capacity of the chest laterally, it also diminishes it vertically, by pushing the superior abdominal viscera upwards against the diaphragm, preventing its descent, and of course impeding respiration. Its effects on the respiration of the female may be noticed by the most superficial observer. She breathes with the diaphragm, receiving no assistance from the intercostal muscles, and consequently the natural movement of the sternum and ribs upwards and outwards is entirely wanting.—The abdominal viscera also feel the effects of compression—the liver and stomach, and in a particular manner, the ascending and transverse colon are deranged.

The muscles which sustain the frame in an erect position are also paralyzed: They cannot perform their functions, and accordingly lose in a great degree their health and vigor. The pressure being continued, at least produces such debility that they cease to exercise any power whatever; and if the corset be laid aside,

the column bends just as the superincumbent weight may incline it, while, if it be continued, the disease is only aggravated.

But this influence on the muscles is only the commencement of a series of causes and effects, which eventually terminate in confirmed disease of all the vital organs—one organ after another yielding to an affection induced by an evil generally unsuspected as the cause, and left to continue its baleful influence.\*]

The feet likewise often suffer by pressure. How a small foot came to be reckoned genteel, I will not pretend to say; but certain it is, that this notion has made many persons lame. Almost nine-tenths of mankind are troubled with corns; a disease that is seldom or never occasioned but by straight shoes. Corns are not only very troublesome, but by rendering people unable to walk, they may likewise be considered as the remote cause of other diseases.†

The size and figure of the shoe ought certainly to be adapted to the foot. In children the feet are as well shaped as the hands, and the motion of the toes as free and easy as that of the fingers; yet few persons in the advanced period of life are able to make any use of their toes; they are generally, by narrow shoes, squeezed all of a heap, and often laid over one another in such a manner as to be rendered altogether incapable of motion. Nor is the high heel less hurtful than the narrow toe. A lady may seem taller for walking on her tiptoes, but she will never walk well in this manner. It strains

\**Norwood on Spinal Diseases*, p. 8.

†We often see persons, who are rendered quite lame by the nails of their toes having grown into the flesh: and frequently hear of mortifications proceeding from this cause. All these, and many other inconveniences attending the feet; must be imputed solely to the use of short and tight shoes.

Though we hear frequently of plasters, salves, and ointments, for eradicating corns, yet they are never known to produce that effect. The only rational mode of proceeding is to soften the corn a little by immersion in warm water, and then to cut it carefully, and to renew this operation every week, till the scarf skin is reduced to its original or natural thinness, after which it must be preserved from the irritating pressure of straight shoes, which had at first occasioned the painful callosity.

her joints, distorts her limbs, makes her stoop, and utterly destroys all her ease and gracefulness of motion.

In fixing on the clothes, due care should be taken to avoid all tight bandages. Garters and buckles, when drawn too tight, not only prevent the free motion and use of the parts about which they are bound, but likewise obstruct the circulation of the blood, which prevents the equal nourishment and growth of these parts, and occasion various diseases. Tight bandages about the neck, as stocks, cravats, and necklaces, are extremely dangerous. They obstruct the blood in its course from the brain, by which means head-aches, vertigoes, apoplexies, and other fatal diseases, are often occasioned.

The perfection of dress is to be easy and clean.—Nothing can be more ridiculous, than for any one to make himself a slave to fine clothes. Such a one, and many such there are, would rather remain as fixed as a statue from morning till night, than discompose a single hair, or alter the position of a pin. Were we to recommend any particular pattern for dress, it would be that which is worn by the people called Quakers.—They are always neat clean, and often elegant, without any thing superfluous. What others lay out upon laces, ruffles, and ribands, they bestow upon superior cleanliness.

We shall only add, with regard to clothing, that it ought not only to be suited to the climate, the season of the year, and the period of life, but likewise to the temperature and constitution. Robust persons are able to endure either cold or heat better than the delicate, consequently may be less attentive to their clothing. But the precise quantity of clothes necessary for any person cannot be determined by reasoning. It is entirely a matter of experience, and every man is the best judge for himself what quantity of clothes is necessary to keep him warm.\*

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\*The celebrated Boerhaave used to say, that nobody suffered by cold, save fools and beggars; the latter not being able to procure clothes, and the former not having sense to wear them. Be this as it may, I can with the strictest truth declare, that in many cases, where the powers of medicine had been tried in vain,



Since the first publication of the preceding remarks, very important changes have taken place in the dress of our fair country women, which afford the strongest proofs of their good sense and taste. The shape is no longer distorted, nor is growth checked and the vital functions impeded by a whalebone press. Easy, safe, and graceful motion in a flat-heeled shoe has completely abolished the awkwardness and danger of the former attempts to totter about, as it were upon stilts. In a word, a becoming regard to health, simplicity and elegance, seems now to have more influence over female fashions than absurdity, caprice, or the desire of concealing any personal deformity.

I wish I could pay my own sex the same compliment which the ladies have so well deserved. But an affectation of what is called military smartness seems to have converted their whole apparel into a system of bandages. The hat is as tight as if it was intended for a helmet, and to defy the fury of a hurricane. Its form also being by no means suited to the natural shape of the head, it must be worn for a considerable time with very painful and unequal pressure, before it can be made to fit its new block. The neck is bolstered up and swathed with the most unnatural stiffness. Easy motion without, and free circulation within, are alike obstructed. Blotches and eruptions in the face, headaches, apoplexies, and sudden deaths, may be often traced to this cause; and if we view its effects in another light, we shall not be surprised at any inconsistency in the language or conduct of persons who take so much pains to suspend all intercourse between the head and the heart.

The close pressure of the other articles of dress is equally reprehensible. Narrow sleeves are a great check upon the muscular exercise of the arms. The waistcoat in its present fashionable form, may be very

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I have cured the patient by recommending thick shoes, a flannel waistcoat and drawers, a pair of under-stockings, or a flannel petticoat, to be worn during the cold season at least. Where warmer clothes is wanted, I would recommend the fleecy hosiery to be worn next the skin.



properly termed a *strait* one; and, no doubt, is in many instances an indication of some mental derangement. The wrists are braced with ligatures, or tight buttoning; and the legs which require the utmost freedom of motion, are screwed into leathern cases, as if to convey an idea that the wearer is sometimes mounted on horseback. To complete the whole, and in order that the feet may be kept in as tight a press as the head, when shoes are to be worn, the shape of the foot, and the easy expansion of the toes is never consulted, but fashion regulates the form of the shoe, sometimes square-toed, frequently pointed, and always sure to produce cramps and corns, the keen, the sensible announcers of every change of the weather. I have so long employed serious argument upon these subjects in vain, that I am now accustomed to view them with pleasantry; and when I meet with such figures, disguised, and rendered truly awkward both in their motions and appearance, I cannot help thinking with Shakspeare, "that some of Nature's journeymen had made them and not made them well; they imitate humanity so abominably!"

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### OF INTEMPERANCE.

A modern author\* observes, that temperance and exercise are the two best physicians in the world. He might have added, that if these were duly regarded, there would be little occasion for any other. Temperance may justly be called the parent of health; yet numbers of mankind act as if they thought diseases and death too slow in their progress, and, by intemperance and debauch, seem as it were to solicit their approach.

The danger of intemperance appears from the very construction of the human body. Health depends on that state of the solids and fluids which fits them for the due performance of the vital functions; and while these go regularly on, we are sound and well; but whatever

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\*Rousseau

disturbs them necessarily impairs health. Intemperance never fails to disorder the whole animal economy; it hurts the digestion, relaxes the nerves, and renders the different secretions irregular, vitiates the humors, and occasions numberless diseases.

The analogy between the nourishment of plants and animals affords a striking proof of the danger of intemperance. Moisture and manure greatly promote vegetation; yet an over-quantity of either will entirely destroy it. The best things become hurtful, nay, destructive, when carried to excess. Hence we learn, that the highest degree of human wisdom consists in regulating our appetites and passions so as to avoid all extremities. It is that chiefly which entitles us to the character of rational beings. The slave of appetite will ever be the disgrace of human nature.

The author of nature has endued us with various passions, for the propagation of the species, the preservation of the individual, &c. Intemperance is the abuse of these passions; and moderation consists in the proper regulation of them. Men, not contented with satisfying the simple calls of nature, create artificial wants, and are perpetually in search for something that may gratify them; but imaginary wants can never be gratified. Nature is content with little; but luxury knows no bounds. Hence the epicure, the drunkard, and the debauchee, seldom stop in their career till their money or their constitution fails; then indeed they generally see their error when too late.

It is impossible to lay down fixed rules with regard to diet, on account of the different constitutions of mankind. The most ignorant person, however, certainly knows what is meant by excess: and it is in the power of every man, if he chooses, to avoid it.

The great rule of diet is to study simplicity. Nature delights in the most plain and simple food, and every animal, except man, follows her dictates. Man alone riots at large, and ransacks the whole creation in quest of luxuries, to his own destruction. An elegant writer\*

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\* Addison.

of the last age speaks thus of intemperance in diet : —  
 “For my part, when I behold a fashionable table set out in all its magnificence, I fancy that I see gout and dropsies, fevers and lethargies, with other innumerable distempers, lying in ambuscade among the dishes.”

Nor is intemperance in other things less destructive than in diet. How quickly does the immoderate pursuit of carnal pleasures, or the abuse of intoxicating liquors, ruin the best constitution ! Indeed these vices generally go hand in hand. Hence it is that we so often behold the votaries of Bacchus and Venus, even before they have arrived at the prime of life, worn out with disease, and hastening with swift pace to an untimely grave. Did men reflect on the painful diseases and premature deaths which are daily occasioned by intemperance, it would be sufficient to make them shrink back with horror from the indulgence even of their darling pleasures.

Intemperance does not hurt its votaries alone : the innocent too often feel the direful effects of it. How many wretched orphans are to be seen whose parents, regardless of the future, spent in riot and debauch what might have served to bring up their offspring in a decent manner ! How often do we behold the miserable mother, with her helpless infants, pining in want, while the cruel father is indulging his insatiate appetite !

Families are not only reduced to misery, but even extirpated, by intemperance. Nothing tends so much to prevent propagation, and to shorten the lives of children, as the intemperance of parents. The poor man who labors all day, and at night lies down contented with his humble fate, can boast a numerous offspring, while his pampered lord, sunk in ease and luxury, often languishes without an heir to his ample fortunes. Even states and empires feel the influence of intemperance, and rise or fall as it prevails.

Instead of mentioning the different kinds of intemperance, and pointing out their influence upon health, we shall only, by way of example, make a few observations on one particular species of that vice, viz : *the abuse of intoxicating liquors.*



Every act of intoxication puts nature to the expense of a fever, in order to discharge the poisonous drought. When this is repeated almost every day, it is easy to foresee the consequences. That constitution must be strong indeed which is able long to hold out under a daily fever; but fevers occasioned by drinking do not always go off in a day; they frequently end in an inflammation of the breast, liver, or brain, and produce fatal effects.

Though the drunkard should not fall by an acute disease, he seldom escapes those of a chronic kind.—Intoxicating liquors, when used to excess, weaken the bowels and spoil the digestion; they destroy the power of the nerves, and occasion paralytic and convulsive disorders; they likewise heat and inflame the blood, destroy its balsamic quality, render it unfit for circulation and the nourishment of the body. Hence obstructions, atrophies, dropsies, and diseases of the lungs. These are common ways in which drunkards make their exit. Disorders of this kind, when brought on by hard drinking, seldom admit of a cure.

Many people injure their health by drinking, who seldom get drunk. The continual habit of “soaking,” as it is called, though its effects be not so violent, is not less pernicious. When the vessels are kept constantly full and upon the stretch, the different digestions can neither be duly performed, nor the humors properly prepared. Hence most people of this character are afflicted with the gout, the gravel, ulcerous sores in the legs, &c. If these disorders do not appear, they are seized with low spirits, hypochondrical affections, and other symptoms of indigestion.

Hard drinking is no doubt one of the causes to which we must impute the increase of consumptions. There are few great ale-drinkers who are not phthisical: nor is that to be wondered at, considering the glutinous and almost indigestible nature of strong ale.

Those who drink ardent spirits or strong wines run still greater hazard; these liquors heat and inflame the blood, and tear the tender vessels of the lungs to pieces.

The habit of drinking proceeds frequently from mis-



fortunes in life. The miserable fly to it for relief. It affords them, indeed, a temporary ease. But, alas! this solace is short-lived; and when it is over, the spirits sink as much below their usual tone as they had before been raised above it. Hence a repetition of the dose becomes necessary, and every fresh dose makes way for another, till the unhappy wretch becomes a slave to the bottle, and at length falls a sacrifice to what at first perhaps was taken only as a medicine. No man is so dejected as the drunkard when his debauch is gone off. Hence it is, that those who have the greatest flow of spirits while the glass circulates freely, are of all others the most melancholy when sober, and often put an end to their own miserable existence in a fit of spleen or ill-humor.

Drunkenness not only proves destructive to health, but likewise to the faculties of the mind. It is strange that creatures, who value themselves on account of a superior degree of reason to that of brutes, should take pleasure in sinking so far below them. Where such as voluntarily deprive themselves of the use of reason to continue ever after in that condition, it would seem but a just punishment. Though this be not the consequence of one act of intoxication, it seldom fails to succeed a course of it. By a habit of drinking, the greatest genius is often reduced to a mere idiot.

Intoxication is peculiarly hurtful to young persons.—It impairs their strength, and obstructs their growth; besides, the frequent use of strong liquors in the early part of life destroys any benefit that might arise from them afterwards. Those who make a practice of drinking generous liquors when young, cannot expect to reap any benefits from them as a cordial in the decline of life.

Drunkenness is not only in itself a most abominable vice, but it is an inducement to many others. There is hardly any crime so horrid that the drunkard will not perpetrate for the love of liquor. We have known mothers sell their children's clothes, the food that they should have eat, and afterwards even the infants themselves, in order to purchase the accursed draught.

It is of the utmost importance to check the first propensities to gluttony and intoxication; or they soon become uncontrollable.

With respect to eating, the stomach, being often put upon the full stretch, feels uneasiness from the least vacuity, and acquires by degrees a sort of unnatural craving, the gratifications of which are sure to be attended with a stupor, debility, and disease.

The same remark is applicable to drinking. After frequent indulgence in excess, the smallest self-denial causes a faintness and depression of spirits, which nothing can remove but the favorite dram or pretended cordial. Nay more, the repetition of the last night's debauch is looked upon as the best remedy for the sickness of the ensuing day. Mild diluting liquors are rejected as insipid, and some hot stimulant is required for the palate and stomach, without considering, that by such means the action of the heart and arteries is stimulated also; that the lungs are inflated; and the whole system is relaxed and enfeebled.

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### CLEANLINESS.

The want of cleanliness is a fault which admits of no excuse. Where water can be had for nothing, it is surely in the power of every person to be clean. The continual discharge from our bodies by perspiration, renders frequent change of apparel necessary. Changing apparel generally prompts the secretion from the skin, so necessary for health. When that matter which ought to be carried off by perspiration is either retained in the body or re-absorbed from dirty clothes, it must occasion diseases.

Diseases of the skin are chiefly owing to want of cleanliness.\* They may, indeed, be caught by infec-

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\* Mr. Pott, in his surgical observations, was the first to notice a disease which he called the chimney-sweeper's cancer, now well known, as it is almost peculiar to that unhappy set of people, and of which he has left us a concise and accurate history. This he attributes to neglect of cleanliness, and with great justice. I am convinced that if that part of the body which is the seat of this cruel disease were kept clean by frequent washing, it would never happen. The climbing-

tion, or brought on by poor living, or unwholesome food; but they will seldom continue long where cleanliness prevails. To the same cause must we impute the various kinds of vermin which infest the human body. These may always be banished by cleanliness alone, and wherever they abound, we have reason to believe it is neglected.<sup>d</sup>

In places where great numbers of people are collected, cleanliness becomes of the utmost importance. It is well known that infectious diseases are communicated by tainted air. Every thing, therefore, which tends to pollute the air, or spread the infection, ought with the utmost care to be guarded against. For this reason, in great towns, no filth of any kind, should be permitted to lie upon the streets.

In many great towns the streets are little better than dung-hills, being frequently covered with ashes, and filth of every kind. Even slaughter-houses, or killing-shambles, are often to be seen in the very centre of great towns. The putrid blood, with which these places are generally covered, cannot fail to taint the air, and render it unwholesome. How easily might this be prevented by active magistrates, who have it always in their power to make proper laws relative to things of this nature, and to enforce the observance of them?

Whatever pretensions people may make to learning, politeness, or civilization, we will venture to affirm, that while they neglect cleanliness they are in a state of barbarity.\*

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boys, as they are called, are certainly the most miserable wretches on the face of the earth; yet, for cleaning chimneys, no such persons are necessary.

According to the opinion of Mr. Earle, (see *Medico Chirurgical Transactions*, vol. xii.) it is invariably produced by the irritation of soot applied to the rugæ or folds of the skin. It is not a common disease, and rarely attacks under the age of thirty, which accounts for its comparative unfrequency.

\* In ancient Rome the greatest men did not think cleanliness an object unworthy of their attention. Pliny says, the *Cloacæ*, or common sewers for the conveyance of filth from the city, were the greatest of all the public works; and bestows higher encomiums upon Tarquinius, Agrippa, and others who made and improved them, than those who achieved the greatest conquests.

How truly great does the Emperor Trajan appear when giving directions to Pliny his proconsul, concerning the making of a common sewer for the health and convenience of a conquered city!



In camps the strictest regard should be paid to cleanliness. By negligence in this matter, infectious diseases are often spread amongst a whole army; and frequently more die of these than by the sword. The Jews, during their encampments in the wilderness, received particular instructions with respect to cleanliness.\*—The rules enjoined them ought to be observed by all in the like situation. Indeed the whole system of laws delivered to that people has a manifest tendency to promote cleanliness. Whoever considers the nature of their climate, the diseases to which they were liable, and their dirty disposition, will see the propriety of such laws.

It is remarkable, that in the most eastern countries, cleanliness makes a great part of their religion. The Mahometan, as well as the Jewish religion, enjoins various bathings, washings, and purifications. No doubt these might be designed to represent inward purity, but they were at the same time calculated for the preservation of health. However whimsical these washings may appear to some, few things would tend more to prevent diseases than a proper attention to many of them. Were every person, for example, after visiting the sick, handling a dead body, or touching any thing that might convey infection, to wash before he went into company, or sat down to meat, he would run less hazard either of catching the infection himself, or of communicating it to others.

*Necessity of frequent ablutions.*—Frequent washing not only removes the filth and sordes which adhere to the skin, but likewise promotes the perspiration braces the body; and enlivens the spirits. How refreshed, how cheerful, and agreeable does one feel on being shaved, washed, and shifted, especially when these offices have been neglected longer than usual!

The eastern custom of washing the feet, though less necessary in this country, is nevertheless very agreeable, and contributes greatly to the preservation of the health. This piece of cleanliness would often prevent colds and

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\*See Deuteron. chap. xxii. ver. 12, 13.



fevers. Were people careful to bathe their feet and legs in lukewarm water at night, after being exposed to cold or wet through the day, they would seldom experience the ill effects which often proceed from these causes.

In places where great numbers of sick people are collected together, as jails, hospitals, cleanliness ought to be most religiously observed. The very smell in such places is often sufficient to make one sick. It is easy to imagine what effect that is likely to have upon the diseased. In an hospital or infirmary, where cleanliness is neglected, a person in perfect health has a greater chance to become sick than a sick person to get well.

Few things are more unaccountable than that neglect, or rather dread of cleanliness, which appears among those who have the care of the sick: they think it almost criminal to suffer any thing that is clean to come near a person in a fever. If cleanliness be necessary for persons in health, it is certainly more so for the sick. Many diseases may be cured by cleanliness alone; most of them might be mitigated by it; and where it is neglected, the slightest disorders are often changed into the most malignant. The same mistaken care which prompted people to prevent the least admission of fresh air to the sick, seems to have induced them to keep them dirty. Both these destructive prejudices will, we hope, be soon entirely eradicated.

Cleanliness is certainly agreeable to our nature. We cannot help approving it in others, even though we should not practice it ourselves. It sooner attracts our regard than even finery itself, and often gains esteem where that fails. It is an ornament to the highest as well as the lowest station, and cannot be dispensed with in either. Few virtues are of more importance to society than general cleanliness. It ought to be carefully cultivated every where; but in populous cities it should be almost revered.\*

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\*As it is impossible to be thoroughly clean without a sufficient quantity of water, we would earnestly recommend it to the magistrates of great towns to be particularly attentive to this article. Most great towns are so situated as to be

## INFECTION AND CONTAGION.

INFECTION is designated a febrific agent, produced by the decomposition of animal and vegetable substances. It usually exists in the state of miasm or gas, and, in this form, occurs in filthy houses, ships, jails, hospitals, and cities; and also in marshes, and fenny and low districts of country. Under the denominations of *marsh, or paludal miasmata, exhalations of the soil, vegetable animal affluvium, malaria, human effluvia, febrile and putrid contagion*, its various specific effects are detailed in the works of practical writers, as having a decided influence on the human body.

Contagion is a poison generated by morbid animal secretion, possessing the power of inducing a similar morbid action in healthy bodies, whereby it is reproduced, and and in indefinitely modified. This contagion can only be known by its effects, and can only be divided into genera by classifying it with the diseases it produces: *e. g.* 1st, Contagion communicable exclusively by contact, the species of which are as follows: *itch, syphilis; sибbens, loanda of Africa, frambesia or yaws, elephantiasis, hydrophobia, and small-pox.*—These diseases cannot be conveyed through the medium of the air, but require actual contact. Hence they are strictly contagious, in the etymological sense of the word. 2d, Contagion communicable both by contact, and by the atmosphere. These are liable to become epidemic in contradistinction, to those of the first genera. In this the species are, small-pox, measles, and hooping-cough.

One of the laws which govern these contagions is, that they are communicable in every season, in the heat of summer as well as in the cold of winter, in a pure as well as an impure air. Another law is, general in-

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easily supplied with water; and those persons who will not make a proper use of it after it is brought to their hand, certainly deserve to be severely punished. The streets of great towns, where water can be had, ought to be washed every day. This is the only effectual method of keeping them thoroughly clean; and, upon trial, we are persuaded it will be found the cheapest.

Some of the most dreadful diseases incident to human nature might, in my opinion, be entirely eradicated by cleanliness.

*susceptibility* to future attacks of the same diseases, but with exceptions.

Infectious diseases are often communicated by clothes. It is extremely dangerous to wear apparel which has been worn by a person who died of an infectious disease, unless it has been well washed and fumigated, as infection may lodge a long time in it; and afterwards produce very tragical effects. This shows the danger of buying at random the clothes which have been worn by other people.

Many are the causes which tend to diffuse infection through populous cities. The whole atmosphere of a large town is one contaminated mass, abounding with various kinds of infection, and must be pernicious to health. The best advice that we can give to such as are obliged to live in large cities, is to choose an open situation; to avoid narrow, dirty, crowded streets; to keep their own house and offices clean; and to be as much abroad in the open air as their time will permit.

["Of all the circumstances, the most necessary to uphold the vital power, and protect the body, from the influence of noxious agents, is, an abundance of fresh air."

"The removal of masses and pools of filth—the draining or enclosure of ponds near towns, where boys drown animals, bathe themselves, and establish a receptacle for every species of filth—and the cleansing and white-washing of houses—are all objects of the highest consideration."

Such as wait upon the sick, in infectious diseases, run great hazard. They ought to keep the patient clean, to sprinkle the room where he lies with vinegar or other strong acids, and frequently to admit a stream of fresh air into it.

"Frequent ablution and purification with cold water, enjoined by the politico-religious codes of the eastern climates, is also one of the best means by which weak persons may resist the vicissitudes of climate, and other causes of disease. This means of purification is highly active and important, in addition to the opportunity of teaching landsmen to swim, and developing the muscular strength of the old and young.



“By a combination of artificial heat and ventilation, purification is effected on the easiest terms. Artificial heat is one of the most important means of purification. The diffusion of steam and of hot air through metallic cylinders, has added much of late years to the means of disinfecting human habitations! By warming the atmosphere near apertures at the more elevated parts of rooms or buildings, the expired and tainted air is led to rush out, whilst the currents of cold that supply its place are sufficiently elevated in temperature, to produce no ill effects on the human body in winter.

“As an inducement to those who keep large establishments, or manufactories, to avail themselves of this purification, we will add, that the warming of houses by steam, has many advantages. On a large scale it will prove most economical. The heat it imparts is not partial, like that of a fire; the room is not exposed to the effects of down-draughts, bringing smoke, and producing injurious effects on the lungs; lastly, the temperature is equable, and allows of regulation by the thermometer.

“As a general means of purification, a bright fire is the best guarantee against the consequence of impure air, and human exhalations. It always produces a current of air, which is a most servicable resource for disinfection in pestilence. The subject of ventilation is one of the highest importance, generally little understood, and still more neglected; but to which we cannot here do justice. It cannot, of course, be overlooked, that the effect of the natural atmosphere on the skin is not merely to carry away effluvia by its currents! Several authors have written on the absorption of nutriment from the atmosphere, by the skin and lungs, and Hufeland even thought, that more nutriment is received in this way than through the lungs.”

Besides heat and currents of air, there are substances that are known to possess, more or less, the power of disinfection; and however trifling it may appear, we will venture to affirm, that a due attention to those things which tend to diffuse infection, as well as those



possessing the power to neutralize it, would be of great importance in preventing diseases.]

As a disinfecting agent, either of the following simple and easily obtained fumigations may be carried at least once a day through the apartments of the sick; or for the purpose of fumigating apartments where sick people have been lodged.

Take nitrate of potash, (nitre,) four drachms.

Sulphuric acid, (oil of vitriol,) two drachms.

Place them in a saucer upon hot sand; or,

Take muriate of soda, (common salt,) three ounces.

Black oxide of manganese, one ounce.

Sulphuric acid, one ounce.

Water, two ounces.

Mix the three first ingredients, and pour in the water gradually, when visible streams of gas will be elicited, capable of destroying the effluvia generated in the apartment, or about the furniture, or bed clothes. The saucer, or other earthenware vessel, containing either of these, may be placed in the middle of the room, observing to have, during its use, the doors and windows closely shut

[A better disinfecting agent, perhaps, than either of the above, is a solution of the chloride of lime, or of the chloride of soda. A solution of either of these salts may be sprinkled over the floor, or placed in the room for a short time, in flat dishes, to favor their evaporation. The use of the chlorides in Egypt, saved the French physicians from the plague, which they were sent to investigate, and appears to have converted some of the Turks from fatalism.

“There is one fact, however, not to be overlooked as regards disinfectant substances which are volatile, viz: that they create an unnatural atmosphere around us.—Most remedies in medicine are evils employed to counteract others of greater magnitude—and the disinfectants form no exception to this rule. As no atmosphere but the natural can suit our respiratory system, it has frequently happened that the volatile infectants have produced mischief with greater certainty than the evil they were destined to counteract. Their evaporation,

therefore, must be measured; they must be placed amidst the greatest currents of air that enter our abodes, that they may be diluted. A constant habit of using such articles without necessity, has produced diseases of the lungs of the most intractable character. Too much caution cannot be exercised in their use." For the means of preserving the health of cities and communities by public works and enactments, see an excellent Treatise on "Hygiene" by H. Belinaye, Esq.]

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### AFFECTIONS OF THE MIND.

Mental affections have great influence both in the cause and cure of diseases. How the mind affects the body, will, in all probability, ever remain a secret. It is sufficient for us to know, that there is established a reciprocal influence between the mental and corporeal parts; and that whatever injures the one, disorders the other.

*Anger.*—The passion of *anger* ruffles the mind, distorts the countenance, hurries on the circulation of the blood, and disorders the whole vital and animal functions. It often occasions fevers, and other acute diseases; and sometimes even sudden death. This passion is peculiarly hurtful to the delicate, and those of weak nerves. I have known such persons frequently lose their lives by a violent fit of anger, and would advise them to guard against the excess of this passion with the utmost care.

It is not, indeed, always in our power to prevent being angry; but we may surely avoid harboring resentment in our breast. Resentment preys upon the mind, and occasions the most obstinate chronic disorders, which gradually waste the constitution. Nothing shows true greatness of mind more than to forgive injuries; it promotes the peace of society, and greatly conduces to our own ease, health and felicity.

Such as value health should avoid violent gusts of anger, as they would the most deadly poison. Neither

ought they to indulge resentment, but to endeavor at all times to keep their minds calm and serene. Nothing tends so much to the health of the body as a constant tranquility of mind.

*Fear.*—The influence of *fear*, both in occasioning and aggravating diseases, is very great. No man ought to be blamed for a decent concern about life; but too great a desire to preserve it, is often the cause of losing it. Fear and anxiety, by depressing the spirits, not only dispose us to diseases, but often render those diseases fatal which an undaunted mind would overcome.

Sudden fear has generally violent effects. Epileptic fits, and other convulsive disorders, are often occasioned by it. Hence the danger of that practice, so common among young people, of frightening one another.—Many have lost their lives, and others have been rendered miserable by frolics of this kind. It is dangerous to tamper with the human passions. The mind may easily be thrown into such disorder as never again to act with regularity.

But the gradual effects of fear prove most hurtful.—The constant dread of some future evil, by dwelling upon the mind, often occasions the very evil itself.—Hence it comes to pass, that so many die of those very diseases of which they long had a dread, or which had been impressed on their minds by some accident, or foolish prediction. This, for example, is often the case with women in child-bed. Many of those who die in that situation, are impressed with the notion of their death, a long time before it happens; and there is reason to believe that this impression is often the cause of it.

The methods taken to impress the minds of females with the apprehensions of the great *pain* and *peril* of child-birth, are very hurtful. Few women die in labor, though many lose their lives after it; which may be thus accounted for. A woman after delivery, finding herself weak and exhausted, immediately apprehends she is in danger; but this fear seldom fails to obstruct the necessary evacuations, upon which her recovery depends. Thus the sex often fall a sacrifice to their

own imagination, when there would be no danger, did they apprehend none.

It seldom happens, that two or three females in a great town die in child bed, but their death is followed by many others. Every woman of their acquaintance who is *enciente* dreads the same fate, and the disease becomes epidemical, by the mere force of imagination.— This should induce them to despise fear, and by all means to avoid those tattling gossips who are continually buzzing in their ears the misfortunes of others. Every thing that may in the least alarm them, ought with the greatest care to be guarded against.

*Grief.*—Grief is the most destructive of all the passions. Its effects are permanent; and when it sinks deep into the mind, it generally proves fatal. Anger and fear, being of a more violent nature, seldom last long; but grief often changes into a fixed melancholy, which preys upon the spirits, and wastes the constitution. This passion ought not to be indulged. It may generally be conquered at the beginning; but when it has gained strength, all attempts to remove it are vain.

No person can prevent misfortunes in life; but it shows true greatness of mind to bear them with serenity. Many persons make a merit of indulging in grief, and when misfortunes happen, they obstinately refuse all consolation, till the mind, overwhelmed with melancholy, sinks under the load. Such conduct is not only destructive to health, but inconsistent with reason, religion, and common sense.

Change of ideas is as necessary for health as change of posture. When the mind dwells long upon one subject, especially of a disagreeable nature, it hurts the whole functions of the body. Hence grief, indulged, spoils the digestion and destroys the appetite; by which means the spirits are depressed, the nerves relaxed, the bowels inflated with wind, and the humors, for want of fresh supplies of chyle, vitiated. Thus many an excellent constitution has been ruined by a family misfortune, or any thing that occasions excessive grief.

It is utterly impossible that any person of a dejected



mind should enjoy health. Life may, indeed, be dragged out for a few years; but whoever would live to a good old age, must be good-humored and cheerful.— This, indeed, is not altogether in our own power; yet our temper of mind, as well as our actions, depend greatly upon ourselves. We can either associate with cheerful or melancholy companions, mingle in the amusements and offices of life, or sit still and brood over our calamities as we choose. These, and many such things, are certainly in our power, and from these the mind generally takes its cast.

The variety of scenes which present themselves to the senses, were certainly designed to prevent our attention from being too long fixed upon any one object. Nature abounds with variety, and the mind, unless fixed down by habit, delights in contemplating new objects. This at once points out the method of relieving the mind in distress. Turn the attention frequently to new objects. Examine them for some time. When the mind begins to recoil, shift the scene. By this means a constant succession of new ideas may be kept up, till the disagreeable ones entirely disappear. Thus, travelling, the study of any art or science, reading or writing on such subjects as deeply engage the attention, will sooner expel grief than the most sprightly amusements.

It has already been observed, that the body cannot be healthy unless it be exercised; neither can the mind. Indolence nourishes grief. When the mind has nothing else to think of but calamities, no wonder that it dwells there. Few people who pursue business with attention are hurt by grief. Instead, therefore, of abstracting ourselves from the world or business when misfortunes happen, we ought to engage in it with more than usual attention, to discharge with double diligence the functions of our station, and to mix with friends of a cheerful and social temper.

Innocent amusements are by no means to be neglected. These, by leading the mind insensibly to the contemplation of agreeable objects, help to dispel the gloom which misfortunes cast over it. They make them seem less tedious, and have many other happy effects.

Some persons, when overwhelmed with grief, betake themselves to drinking. This is making the cure worse than the disease. It seldom fails to end in the ruin of fortune, character, and constitution.

*Love.*—Love is perhaps the strongest of all the passions. At least when it becomes violent, it is less subject to the control either of the understanding or will, than any of the rest. Fear, anger, and several other passions, are necessary for the preservation of the individual, but love is necessary for the continuation of the species itself; it was therefore proper that this passion should be deeply rooted in the human breast.

Though love be a strong passion it is seldom so rapid in its progress as several of the others. Few persons fall desperately in love all at once. We would therefore advise every one, before he tampers with this passion, to consider well the probability of his being able to obtain the object of his wishes. When that is not likely, he should avoid every occasion of increasing it. He ought immediately to flee the company of the beloved object; to apply his mind attentively to business or study; to take every kind of amusement; and above all, to endeavor, if possible, to find another object which may engage his affections, and which it may be in his power to obtain.

There is no passion with which people are so apt to tamper as love, although none is more dangerous.—Some men make love for amusement, others from mere vanity, or on purpose to show their consequence with the fair.

This is perhaps the greatest piece of cruelty which any one can be guilty of. What we eagerly wish for, we easily credit. Hence the too credulous fair are often betrayed into a situation which is truly deplorable, before they are able to discover that the pretended lover was only in jest. But there is no jesting with this passion. When love has got to a certain height, it admits of no other cure but the possession of its object, which in this case ought always, if possible, to be obtained.

*Religious Melancholy.*--Persons of a religious turn of mind behave as if they thought it a crime to be cheerful. They imagine the whole of religion consists in certain mortifications, or denying themselves the smallest indulgence, even in the most innocent amusements. A perpetual gloom hangs over their countenances, while the deepest melancholy preys upon their minds. At length the fairest prospects vanish, every thing puts on a dismal appearance, and those very objects which ought to give delight, afford nothing but disgust. Life itself becomes a burden, and the unhappy wretch, persuaded that no evil can equal what he feels, often puts an end to his miserable existence.

It is a pity that religion should be so far perverted, as to become the cause of those very evils which it was designed to cure. Nothing can be better calculated than *true religion* to raise and support the minds of its votaries under every affliction that can befall them. It teaches that even the sufferings of this life are preparatory to the happiness of the next; and that all who persist in a course of virtue shall at length arrive at complete felicity.

Persons whose business it is to recommend religion to others, should beware of dwelling too much on gloomy subjects. That peace and tranquility of mind, which true religion is calculated to inspire, is a more powerful argument in its favor, than all the terrors that can be uttered. Terror may indeed deter men from outward acts of wickedness, but can never inspire them with that love of God, and real goodness of heart, in which alone true religion consists.

To conclude, the best way to counteract the violence of any passion, is to keep the mind closely engaged in some useful pursuit.

I have often heard that the late Lord Kaimes, when he saw any literary friend sinking under the pressure of melancholy, or some other corroding passion, always gave this advice in a few emphatic words, "Write a book;" which he believed to be an infallible remedy. I also knew the author of a very beautiful elegy cured of his grief for a wife, whom he tenderly loved, by studying



how to express the greatness of his loss, and the pungency of his sorrows in the most plaintive and affecting strains. Indeed, the earnest direction of our thoughts to some important object is, as I before hinted, the surest method of subduing passions which may stubbornly resist the control of reason.

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### THE NATURAL EVACUATIONS.

The principal evacuations from the human body are those by *stool*, *urine*, and *insensible perspiration*.—None of these can be long obstructed without impairing the health. When that which ought to be thrown out of the body is too long retained, it not only occasions a *plethora*, or too great fullness of the vessels, but acquires qualities which are hurtful to the health.

Few things conduce more to the health than keeping the body regular. When the *fæces* lie too long in the bowels, they cause disease; and when they are too soon discharged, the body is not sufficiently nourished. A medium is therefore to be desired which can only be obtained by regularity in diet, sleep and exercise.—Whenever the body is not regular, there is reason to suspect a fault in one or another of these.

Persons who eat and drink at irregular hours, and who eat various kinds of food, and drink of several different kinds of liquors at every meal, have no reason to expect either that their digestion will be good, or discharges regular. Irregularity in eating and drinking disturbs every part of the animal economy, and never fails to occasion diseases. Either too much or too little food will have this effect. The former, indeed, generally occasions looseness, and the latter costiveness; but both have a tendency to hurt the health.

It would be difficult to ascertain the exact number of stools which may be consistent with health, as these differ in the different periods of life, in different constitutions, and even in the same constitutions under a different regimen of diet, exercise, &c. It is, however, generally allowed that one stool a-day is sufficient for



an adult, and that more or less is hurtful. But this, like most general rules, admits of many exceptions. I have known persons in perfect health who did not go to stool above once a week.\* Such a degree of costiveness, however, is not safe; though the person who labors under it may for some time enjoy tolerable health, yet at length it may occasion diseases.

One method of procuring a stool every day is to rise betimes, and go abroad in the open air. Not only the posture in bed is unfavorable to regular stools, but also the warmth. This, by promoting perspiration, lessens all the other discharges.

The method recommended for this purpose, by Mr. Locke, is likewise very proper, viz: *to solicit nature, by going regularly to stool every morning, whether one has a call or not.* Habits of this kind may be acquired, which will in time become natural.

Persons who have frequent recourse to medicines for preventing costiveness seldom fail to ruin their constitutions. Purging medicines frequently repeated weaken the bowels, hurt the digestion, and every dose makes way for another, till at length they become as necessary as daily bread. Those who are troubled with costiveness ought rather, if possible, to remove it by diet than drugs. They should likewise be thinly clothed, and avoid every thing of an astringent or of an heating nature. The diet and other regimen necessary in this case will be found under the article *Costiveness*, where this state of the bowels is treated as a disease.

Such persons as are troubled with an habitual looseness, ought likewise to suit their diet to the nature of their complaints. They should use food which braces and strengthens the bowels, and which is rather of an astringent quality, as wheat bread made of the finest flour, cheese, eggs, or rice boiled in milk. Their drink should be red port, claret, brandy and water, in which toasted bread has been boiled, and such like.

As an habitual looseness is often owing to an ob-

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\*Some persons have told me that they did not go to stool above once a month.

structed perspiration, persons affected with it ought to keep their feet warm, to wear flannel next their skin, and take every other method to promote the perspiration. Further directions with regard to the treatment of this disease will be found under the article *Looseness*.

*Urine*.—So many things tend to change both the quantity and appearance of the urine, that it is very difficult to lay down any determined rules for judging of either.\* Dr. Cheyne says, the urine ought to be equal to three-fourths of the liquid part of our aliment. But suppose any one were to take the trouble of measuring both, he would find that every thing which altered the degree of perspiration would alter this proportion, and likewise that different kinds of aliment would afford very different qualities of urine. Though for these, and other reasons, no rule can be given for judging the precise quantity of urine which ought to be discharged, yet a person of common sense will seldom be at a loss to know when it is in either extreme.

As a free discharge of urine not only prevents but actually cures many diseases, it ought by all means to be promoted; and every thing that may obstruct it should be carefully avoided. Both the secretion and discharge of urine are lessened by a sedentary life, sleeping on beds that are too soft and warm, food of a

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\*It has long been an observation among physicians, that the appearances of the urine are very uncertain, and very little to be depended on. No one will be surprised at this, who considers how many ways it may be affected, and, consequently, have its appearance altered. The passions, the state of the atmosphere, the quantity and quality of the food, the exercise, the clothing, the state of the other evacuations, and numberless other causes, are sufficient either to induce a change in the quantity or appearance of the urine. Any one who attends to this will be astonished at the impudence of those daring quacks, who pretend to find out diseases, and prescribe to patients, from the bare inspection of their urine. These impostors, however, are very common all over Britain, and, by the amazing credulity of the populace, many of them amass considerable fortunes. Of all the medical prejudices which prevail in this country, that in favor of *urine doctors* and *steam doctors* is the strongest. Many have still an unlimited faith in their skill, although it has been demonstrated that no one of them is able to distinguish the urine of a horse, or any other animal, from that of a man.

dry and heating quality, liquors which are astringent and heating, as red port, claret, and such like. Those who have reason to suspect that their urine is in too small quantity, or who have any symptoms of the gravel, ought not only to avoid these things, but whatever else they find has a tendency to lessen the quantity of their urine.

When the urine is too long retained, it is not only resorbed, or taken up again into the mass of fluids, but by stagnating in the bladder it becomes thicker, the more watery parts flying off first, and the more gross and earthly remaining behind. By the constant tendency which these have to concrete, the formation of stones and gravel in the bladder is promoted. Hence it comes to pass that indolent and sedentary people are much more liable to these diseases than persons of a more active life.

Many persons have lost their lives, and others have brought on very tedious, and even incurable disorders, by retaining their urine too long, from a false delicacy. When the bladder has been over-distended, it often loses its power of action altogether, or becomes paralytic, by which means it is rendered unable either to retain the urine, or expel it properly. The calls of nature ought never to be postponed. Delicacy is doubtless a virtue, but that can never be reckoned true delicacy which induces any one to risk his health, or hazard his life.

But the urine may be in too great, as well as too small a quantity. This may be occasioned by drinking large quantities of weak watery liquors, by the excessive use of alkaline salts, or any thing that stimulates the kidneys. This disorder very soon weakens the body, and induces a consumption. It is difficult to cure, but may be mitigated by strengthening diet and proper medicines, such as are recommended under the article Diabetes, or excessive discharge of urine.

*Perspiration.*—Insensible perspiration is generally reckoned the greatest of all the discharges from the human body. It is of so great importance to health,



that few diseases attack us while it goes properly on; but when it is obstructed, the whole frame is soon disordered.\* This discharge, however, being less perceptible than any of the rest, is consequently, less attended to. Hence it is that acute fevers, rheumatisms, or agues, often proceed from obstructed perspiration, before we are aware of its having taken place.

On examining patients, we find most of them impute their diseases either to violent colds which they had caught, or to slight ones which they had neglected.—For this reason, instead of a critical inquiry into the nature of the perspiration, its difference in different seasons, climates and constitutions, we shall endeavor to point out the causes which most commonly obstruct it, and to show how far they may be either avoided, or have their influence counteracted by timely care.

One of the most common causes of obstructed perspiration,† or catching cold, in this country, is the changeableness of the weather, or state of the atmosphere. The degrees of heat and cold are not only

\*Sanctorius, an Italian physician, was the first that directed the attention of the faculty to the cutaneous and pulmonary transpiration, which he proved to exceed the other secretions considerably in weight; and he maintained that this function must have a considerable influence on the system, and was deserving of great consideration in the treatment of diseases. There is, doubtless, much of truth in this general observation; but in its application to practice, he appears to have gone to an extravagant length, and to have considerably contributed to prolong the humoral pathology, which referred all diseases to a vitiated state of the fluids, which is now well known to be the effect instead of the cause.

† From the time of Sanctorius, colds, coughs, fevers, and other diseases, have been attributed, by many, to the suppression of perspiration; although there was no direct experiment to prove it. That this may sometimes act as a cause there can be little doubt, but not so frequently as has been imagined; for we see people sometimes perspiring a great deal, at other times not at all, and without any bad effect. A man, in fine, enjoys as good health in winter as in summer; in cold as in hot countries; and, besides that perspiration is carried on to a great extent by the lungs, nature has also taken care to guard against obstructed perspiration, by making it a vicarious secretion with the urine; for when the former is increased the latter is diminished, and *vice versa*. The matter of perspiration, nevertheless, appears to be useless to the human frame, and perhaps contains materials that might prove hurtful if retained, hence, when obstructed, it may produce some complaints and aggravate others; although many of the diseases attributed to retained perspiration arise from mere torpors of the skin: and the effects is here taken for the cause. See *Diaphoretics, Cold Bath, &c.*



very different in the different seasons of the year, but often change almost from one extreme to another in a few days, and sometimes even in the course of one day. That such changes must affect the state of the perspiration is obvious to every one.

The best method of fortifying the body against the changes of the weather is, to be abroad every day.—Those who keep most within doors, are most likely to catch cold. Such persons generally render themselves so delicate, as to feel even the slightest changes in the atmosphere, and by their pains, coughs, and oppressions of the breast, they become a kind of living barometers.

*Wet Clothes.*—Wet clothes not only by their coldness obstruct the perspiration, but their moisture, by being absorbed, or taken up into the body, greatly increases the danger. The most robust constitution is not proof against the danger arising from wet clothes; they daily occasion fevers, rheumatisms, and other fatal disorders, even in the young and healthy.

It is impossible for people who go frequently abroad to avoid sometimes being wet. But the danger might generally be lessened, if not wholly prevented, by changing their clothes soon; when this cannot be done, they should keep in motion till they be dry. So far are many from taking this precaution, that they often sit down or lie down in the fields with their clothes wet, and frequently sleep even whole nights in this condition. The frequent instances which we have of the fatal effects of this conduct, ought certainly to deter all from being guilty of it.

*Wet Feet.*—Wet feet often occasion fatal diseases. The colic, inflammations of the breast and of the bowels, the iliac passion, and cholera morbus, are often occasioned by wet feet. Habit will, no doubt, render this less dangerous; but it ought as far as possible to be avoided. The delicate, and those who are not accustomed to have their clothes or feet wet, should be peculiarly careful in this respect.

*Night Air.*—The perspiration is often obstructed by night air; even in summer this ought to be avoided.—The dews which fall plentifully after the hottest day, make the night more dangerous than when the weather is cool. Hence in warm countries, the evening dews are more hurtful than where the climate is more temperate.

It is very agreeable after a warm day to be abroad in a cool evening; but this is a pleasure to be avoided by all who value their health. The effects of evening dews are gradual, indeed, and almost imperceptible; but they are not less to be dreaded: we would therefore advise travellers, laborers and all who are much heated by day, carefully to avoid them. When the perspiration has been great, these become dangerous in proportion. By not attending to this, in flat marshy countries, where the exhalation and dews are copious, laborers are often seized with intermitting fevers, quinsies, and other dangerous diseases.

*Damp Beds.*—Beds become damp, either from their not being used, standing in damp houses, or rooms without fire, or from the linen not being dry when laid on the bed. Nothing is more to be dreaded by travellers than damp beds. When a traveller, cold and wet, arrives at an inn, he may, by means of a good fire, and a dry bed, have the perspiration restored; but if he be put into a cold room, and laid in a damp bed, it will be more obstructed, and the worst consequences will ensue. Travellers should avoid inns which are noted for damp beds, as they would a house infected with the plague, as no man, however robust, is proof against the danger arising from them.

But inns are not the only places where damp beds are to be met with. Beds kept in private families for the reception of strangers are often equally dangerous. All kinds of linen and bedding, when not frequently used, become damp. How then is it possible that beds which are not slept in above two or three times a-year, should be safe? Nothing is more common than to hear

people complain of having caught cold by changing their bed. The reason is obvious: were they careful never to sleep in a bed but what was frequently used, they would seldom find any ill consequences from a change.

Nothing is more to be dreaded by a delicate person when on a visit, than being laid in a bed which is kept on purpose for strangers. That ill-judged piece of complaisance becomes a real injury. All the bad consequences from this quarter might easily be prevented in private families, by causing their servants to sleep in the spare beds, and resign them to strangers when they come. In inns, where the beds are used almost every night, nothing else is necessary than to keep the rooms well seasoned by frequent fires, and the linen dry.

That baneful custom, said to be practised in many inns, of damping sheets, and pressing them, in order to save washing, and afterwards laying them on the beds, ought, when discovered, to be punished with the utmost severity. It is really a species of murder, and will often prove as fatal as poison or gun-shot. Indeed no linen, especially if it has been washed in winter, ought to be used till it has been exposed for some time to the fire; nor is this operation less necessary for linen washed in summer, provided it has lain for any length of time.—This caution is the more needful, as gentlemen are often exceedingly attentive to what they eat or drink at an inn, yet pay no regard to a circumstance of much more importance.\*

*Damp Houses.*—Damp houses frequently produce the like ill consequences: for this reason those who build should be careful to choose a dry situation. A house which stands on a damp marshy soil or deep clay, will never be thoroughly dry. All houses, unless where the ground is exceedingly dry, should have the first floor

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\* If a person suspect that his bed is damp, the simple precaution of taking off the sheets and lying in the blankets, with all, or most of his clothes on, will prevent all the danger. I have practised this for many years, and never have been hurt by damp beds, though no constitution, without care, is proof against their baneful influence,



a little raised. Servants and others, who are obliged to live in cellars and sunk stories, seldom continue long in health: masters ought surely to pay some regard to the health of their servants, as well as to their own.

Nothing is more common than for people, merely to avoid some trifling inconveniences, to hazard their lives by inhabiting a house almost as soon as the masons and plasterers have done with it; such houses are not only dangerous from their dampness, but likewise from the smell of lime and paint. The asthmas, consumptions, and other diseases of the lungs, so incident to people who work among these articles, are sufficient proofs of their being unwholesome.

Rooms are often rendered damp by an unseasonable piece of cleanliness; I mean the pernicious custom of washing them immediately before company is put into them. Most people catch cold if they sit but a very short time in a room that has been lately washed; the delicate ought carefully to avoid such a situation, and even the robust are not always proof against its influence.\*

*Sudden Transitions from Heat to Cold.*—The perspiration is commonly obstructed by sudden transitions from heat to cold. Colds are seldom caught, unless when people have been too much heated. Heat rarifies the blood, quickens the circulation, and increases the perspiration: but when these are suddenly checked, the consequences must be bad. It is, indeed, impossible for laborers not to be too hot upon some occasions; but it is generally in their power to let themselves cool gradually, to put on their clothes when they leave off work, to make choice of a dry place to rest themselves in, and to avoid sleeping in the open fields. These easy rules, if observed, would often prevent fevers and other fatal disorders.

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\* People imagine if a good fire is made in a room after it has been washed, that there is no danger from sitting in it; but they must give me leave to say that this increases the danger. The evaporation excited by the fire generates cold, and renders the damp more active.



It is very common for people, when hot, to drink freely of cold water, or small liquors. This conduct is extremely dangerous. Thirst, indeed, is hard to bear, and the inclination to gratify that appetite frequently gets the better of reason, and makes us do what our judgment disapproves. Every man, however, knows, if his horse be permitted to drink his belly-full of cold water, after violent exercise, and be immediately put into the stable, or suffered to remain at rest, that it will kill him.

This they take the utmost care to prevent. It were well if they were equally attentive to their own safety.

Thirst may be quenched many ways without swallowing large quantities of cold liquor. The fields afford variety of acid fruits and plants, the very chewing of which would abate thirst. Water kept in the mouth for some time, and spit out again, if frequently repeated, will have the same effect. If a bit of bread be eaten along with a few mouthfuls of water, it will both quench thirst more effectually, and make the danger less.—When a person is extremely hot, a mouthful of brandy, or other spirits, if it can be obtained, ought to be preferred to any thing else. But if any one has been so foolish, when hot, as to drink freely of cold liquor, he ought to continue his exercise at least till what he drank be thoroughly warmed upon his stomach.

It would be tedious to enumerate all the bad effects which flow from drinking cold liquors when the body is hot. Sometimes this has occasioned immediate death. Hoarseness, quinsies, and fevers of various kinds, are its common consequences. Neither is it safe when warm to eat freely of raw fruits, salads or the like.—These, indeed, have not so sudden an effect upon the body as cold liquors, but they are notwithstanding dangerous, and ought to be avoided.

Sitting in a warm room, and drinking hot liquors till the pores are quite open, and immediately going into the cold air, is extremely dangerous. Colds, coughs, and inflammations of the breast, are the usual consequences of this conduct; yet nothing is more common than for people, after they have drank warm liquors for

several hours, to walk or ride a number of miles in the coldest night, or to ramble about in the streets.

People are very apt, when a room is hot, to throw open a window, and to sit near it. This is a most dangerous practice. Any person had better sit without doors than in such a situation, as the current of air is directed against one particular part of the body. Inflammatory fevers, quinsies, and consumptions have often been occasioned by sitting or standing thinly clothed near an open window. Nor is sleeping with open windows less to be dreaded. That ought never to be done, even in the hottest season, unless the window is at a distance. I have known mechanics frequently contract fatal diseases, by working stripped at an open window, and would advise all of them to beware of such a practice.\*

Few things expose people more to catch cold than keeping their own houses too warm: such persons may be said to live in a sort of hot houses; they can hardly stir abroad to visit a neighbor but at the hazard of their lives. Were there no other reason for keeping houses moderately cool, that alone is sufficient; but no house that is too hot can be wholesome; heat destroys the spring and elasticity of the air, and renders it less fit for expanding the lungs, and the other purposes of respiration. Hence it is that consumptions and other diseases of the lungs prove so fatal to people who work in forges, glass houses, and the like.

Some are even so imprudent as to plunge themselves, when hot, in cold water.† Not only fevers, but mad-

\*Although this long contradicted opinion, which daily observation confirms, has also been contradicted by Sir Arthur Clarke, the analogies are too wide to bear comparison. It will, we believe, be universally admitted that a current of air passing upon an overheated body, although it might not prove "*inevitably fatal*," is neither consistent with safety or prudence, while that body is in a passive state; and in an active one it is better to be removed some distance from a voluminous rush of air, which would be the means of keeping perspiration in check that was laboring to be set free, thereby counteracting the effects of exertion.

†A modern writer, (Sir Arthur Clarke,) entertains, we rather suspect, an untenable opinion on this particular subject; nor do we conceive in what manner

ness itself, has frequently been the effect of this conduct. Indeed it looks too much like the action of a madman to deserve a serious consideration.

The result of these observations is, that every one ought to avoid, with the utmost attention, all sudden transitions from heat to cold, and to keep the body in as uniform a temperature as possible; or where that cannot be done, to take care, when heated, to let it cool gradually.

People may imagine that too strict an attention to these things would tend to render them delicate. So far, however, is this from being my design, that the very first rule proposed for preventing colds is, to harden the body, by inuring it daily to the open air.

I shall put an end to what relates to this part of my subject, by giving an abstract of the justly celebrated advice of Celsus, with respect to the preservation of

sudden external transitions should be attended with less danger than such as are internally applied. "It has been very commonly supposed," observes Sir Arthur, "even by medical men, that immersion in the cold-bath, when the body was considerably heated with exercise or other exertion, is a dangerous practice; and, accordingly, it is a general custom with bathers who find themselves overheated, to wait till they become cool, before they plunge into the bath. This opinion and practice has been ably controverted by the late Dr. Currie, who has shown, both from theory and experience, that the opinion is erroneous, and the practice injurious. This is so true, that for some years he has directed infirm persons to use a degree of exercise before immersion, as may produce an increased action of the vascular, with some increase of heat, and thus secure a force of re-action under the shock, which otherwise might not always take place." We think Sir Arthur has brought Dr. Currie forward rather untimely; for it is evident the latter alludes to infirm persons, convalescents, with whom almost invariably the heat of the body, accompanied with a sense of chilliness is below the natural standard: it is judicious, therefore, enough that such people should use a *degree* of exercise to enable them to resist the shock of the cold-bath, and to secure a re-action under it, which otherwise they could not withstand. This practice, however, applies equally to persons in health, whom we would caution never to use the cold-bath at a time when a cold sensation pervades the whole body, any more than to plunge into it at a time when the body is overheated; although both of these conditions may admit of being considerably regulated by the feelings of the individual. "The popular opinion, therefore," says Sir Arthur Clarke, upon the preceding grounds, "that it is safest to go perfectly cool into the water is an *unfounded error* productive of injurious consequences." Practice and experience, with all deference to such an opinion, have proved the reverse.

health: "A man," says he, "who is blessed with good health, should confine himself to no particular rules either with respect to regimen or medicine. He ought frequently to diversify his manner of living; to be sometimes in town, sometimes in the country; to hunt, sail, indulge himself in rest, but more frequently to use exercise. He ought to refuse no kind of food that is commonly used, but sometimes to eat more and sometimes less; sometimes to make one at an entertainment, and sometimes to forbear it; to make rather two meals a day than one, and always to eat heartily, provided he can digest it. He ought neither too eagerly to pursue, nor too scrupulously to avoid intercourse with the fair sex: pleasures of this kind, rarely indulged, render the body alert and active; but when too frequently repeated, weak and languid. He should be careful in time of health not to destroy, by excess of any kind, that vigor of constitution which should support him under sickness."



## PART II.

### THE KNOWLEDGE AND CURE OF DISEASES.

**PHYSIOGNOMY OF DISEASES.**—The term Physiognomy applied to medicine, includes much more than the appearance or expression of the countenance, It embraces the whole exterior of the sick, so far as it can lead us to a knowledge of the nature of the disease.—The circumstances and parts which chiefly demand our attention, are, the *countenance*, the *tongue*, the *teeth*, the *respiration*, *expectoration*, the *excrements*, the *decubitus*, or *posture*, and the *appearance of the extremities*.

1. *Of the Countenance.*—There are several diseases, the existence of which may be discovered, by an experienced person, from the appearance of the countenance. Among them are Jaundice, Dropsy, Consumption, confirmed Diarrhœa, and all eruptive diseases. Besides the yellowness of the skin in Jaundice, there is a certain dullness of the intellectual faculties, bordering on moroseness, so frequently attendant on complaints of the liver. The countenance of Phthisis Pulmonalis, or Consumption, is known to every one.—There is a circumscribed spot in the skin of the neck, very florid and bright; a vivid, sparkling eye, and lips of a lively ruby color. The hectic flush is sometimes perceivable in Peripneumony. The countenance which accompanies Pestilential Fevers is difficult of description. A red, suffused, or muddy eye; a contracted, frowning brow; and a dusky, red or livid color of the skin, are commonly the characteristic appearances. In very bad cases of the Winter Epidemic, which sometimes sweeps over the United States with fatal violence, the appearance of the countenance is more like that of

bronze than a livid or leaden color. In the diseases of children, a knowledge of this branch of the physiognomy of disease is of especial use. 'The countenance greatly changed in any respect from its healthy aspect, indicates danger. Hence, the most common observer, will often remark that such a person is ill, because he does not look like himself. The return of the natural countenance is a favorable indication.

The appearance of the eye in sickness is very various. "If," says Hyppocrates, "they avoid the light, or weep involuntarily, or are drawn on one side, or are of unequal size, or are red in the whites, or have dark veins on their surface, or are elevated, or have irregular motions, or are thrust out from their orbits, or are hollow, or are squalid, without brightness—all these are indicative of great danger." To this catalogue may be added, the dilatation of the pupil on exposure to light, involuntary rolling of the eye ball, and sleeping with the eyes turned up under the upper eye lid, the lids being only partially closed. A dilated pupil indicates an oppressed brain; a contracted one points to the actual existence or the approach of inflammation of that organ; and sleep, with the eye lids partially closed, is symptomatic of a diseased condition of the alimentary canal. Sparkling, ardent, or fixed eyes, indicate delirium.—There is a state of the countenance consisting in a kind of sarcastic smile. It is termed *risus sardonicus*, and is a symptom of bad import. It has been supposed to be expressive of inflammation of the diaphragm or midriff. It is almost always symptomatic of approaching delirium, and is associated with inflammation of the stomach. It is always present in cases of poisoning by the introduction of the seeds or extract of Jamestown Weed into the stomach.

2. *The Tongue.*—The tongue is an excellent index of the condition of the biliary organs and alimentary canal. When yellow or green, it is almost always indicative of a bilious attack. In inflammation it is generally white. The livid, dark, or chopped tongue, is a symptom of great danger. Sometimes it appears like

raw beef, as if the skin were entirely removed. This is also an unfavorable circumstance. Tremors of the tongue when projected out of the mouth, are a dangerous sign; as is, also, a natural appearance of that organ in pestilential fevers. But when it clears after having been foul; when it becomes moist after having been dry; and steady from a trembling condition, it is symptomatic of a favorable change.

There is a remarkable difference between the appearance of the tongue in diseases of the lungs, and that which is exhibited in those of the stomach and bowels. When the pulmonary organs are affected it continues clean, and sometimes becomes even more so than natural. In complaints of the alimentary system, it is generally loaded with fur, or covered with viscid matter. This will assist in distinguishing between these two classes of disease in doubtful cases.

3. *The Teeth*.—When they become foul, and are of a yellow, or green, or dark color, they indicate the presence of malignant typhus action in the system, or great disturbance of the vital organs. Grating the teeth is also a sign of visceral disease, unless the patient has been in the habit of doing the same in health.—Grinding and gnashing of the teeth is often the harbinger of approaching delirium. It is also a symptom of worms in children, when they grind their teeth while sleeping.

4. *Respiration*.—When laborious, and accompanied with heaving of the shoulders, it is expressive of the utmost danger. Quick respiration, resembling the quick, jerking motion of the pulse, is always to be dreaded. If frequent and small, it is indicative of inflammation of the parts employed in breathing. As often as inflammation of the lungs or pleura occurs, the respiration becomes more frequent and confined. It is hailed as a favorable omen, when the patient can make a full and free inspiration, in diseases of the chest.—An unequal respiration is unfavorable; as it indicates a difficult passage of the blood through the lungs. In acute diseases, where the stomach is affected, *hiccough* is a sign of great danger; but it is not always so in



nervous affections. In all cases where the breathing is accompanied by considerable motion of the nostrils, it may be concluded that there is much danger.

5. *Expectoration*.—When mucus is discharged from the lungs without difficulty, it is always auspicious. It is a good sign when of natural yellow in the commencement of Pleurisy; but when it is thin, dark and bloody, with heavy inspiration, the danger is uniformly great. Light and frothy expectoration, in acute diseases, affords little relief, but no great danger is pointed out. A discharge of purulent matter is always more or less alarming, as it indicates the existence of an abscess in the lungs, or perhaps a high degree of inflammation in the lining membrane of the wind-pipe. The most favorable expectoration is a yellow tough mucus: it appears to afford most relief in injuries of the lungs.

6. *The Excrementitious discharges*.—These consist of the fæces, urine and perspiration, and have already been treated of at some length. They are mentioned again for the purpose of pointing out some of their appearances indicative of disease.

As regards the fæces, they are liable to many derangements. 1st. Watery stools is a sign of great relaxation and debility, or a high degree of irritation in the bowels. 2d. Lumpy or scybalous discharges, with mucus, slime or blood, show inflammation of the bowels, and are more likely to occur in the early stage of Dysentery. 3d. Deep green, yellow, or black tarry stools, denote a preternatural quantity of bile in the intestines. 4th. Clay-like, ash-colored evacuations, denote a want of bile. Excrementitious matter mixed with the food, always attends imperfect digestion, or such irritation of the alimentary canal that the food passes too quickly through it to be perfectly digested.

In relation to the *urine*, we are disposed with the ancient physicians to regard its appearance as a principal indication of the nature of diseases, and nearly as much to be relied on as the state of the alvine evacu-



ations. 1st. The urine discharged in excess, and of a pallid color, always denotes relaxation of the kidneys, congestion of those organs, or a serious disturbance of the brain, or some other part of the nervous system. 2d. Deficient discharge of urine denotes great irritation of the urinary organs, or imperfect absorption. 3d.—When the urine is loaded with saccharine matter, or has a milky appearance, it indicates a diseased state of the chylopoetic organs, and particularly of the stomach. 4th. Copious discharges of urine, though generally favorable at the crisis of a case, are not always so.—They uniformly indicate the approach of convalescence in Rheumatism and Gout; but invariably denote imminent danger in affections of the lungs and brain.

*Perspiration* occurring at the crisis of acute diseases, is uniformly favorable, when accompanied by warmth and softness, with some slight color or suffusion of the skin. Cold sweats and a pallid skin are alarming symptoms, except when they occur in some nervous affections.

7. *Decubitus* or *Posture*.—If the sick can lie only on one side, it is a bad symptom—if on neither, it is still worse. It is alarming when they assume any posture different from that which they usually assume in health. Restlessness and tossing of the hands and feet are signs of danger. If the patient lies on his belly, contrary to his usual custom, either delirium or severe pain in the bowels is indicated. But the worst symptoms of all, is, when he lies on his back, sliding downwards towards the foot of the bed, his knees open and bent to each side, and his mouth open during sleep.

8. *Of the Extremities*.—An unusual temperature of the extremities is unfavorable. Cold wrists and warm hands are signs of great danger, and may be considered universally, perhaps, as a fatal symptom.—Cold feet are alarming, but not so much so as cold wrists. The former is constitutional with some persons, and when it occurs in disease, inquiries should always be made relative to this point. Cold breath is a fatal

symptom, yet I have known persons attacked with malignant cholera recover after the appearance of that symptom. Chilliness continuing longer than usual denotes considerable danger ; so, also, do intense sensations of heat in the advanced stages of disease, especially if they be internal, as in the stomach, bowels, and lungs.]

**DEFINITION OF DISEASES**—Every disease may be considered as an assemblage of symptoms, and must be distinguished by those which are most obvious and permanent. Instead, therefore, of giving a classical arrangement of diseases, according to the systematic method, it will be more suitable, in a work of this nature, to give a full and accurate description of each particular disease as it occurs; and, where any of the symptoms of one disease have a near resemblance to those of another,\* to take notice of that circumstance, and at the same time to point out the peculiar or characteristic symptoms by which it may be distinguished. By a due attention to these, the investigation of diseases will be found to be a less difficult matter than most people would at first be ready to imagine.

A proper attention to the patient's age, sex, temper of mind, constitution and manner of life, will likewise greatly assist, both in the investigation and treatment of diseases.

In childhood the fibres are lax and soft, the nerves extremely irritable, and the fluids thin: whereas in old age the fibres are rigid, the nerves become almost insensible, and many of the vessels imperviable. These and other peculiarities render the diseases of the young and aged very different, and of course they must require a different method of treatment.

Females are liable to many diseases which do not afflict the other sex: besides, the nervous system being

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\* Physicians express these symptomatic characters by the word *Diagnosis*; viz: the signs by which one disease may be distinguished from another disease.—Hence those symptoms which distinguish such affections are termed *diagnostic signs*.

more irritable in them than in men, their diseases require to be treated with greater caution. They are less able to bear large evacuations; and all stimulating medicines ought to be administered to them with a sparing hand.

Particular constitutions not only dispose persons to peculiar diseases, but likewise render it necessary to treat these diseases in a peculiar manner. A delicate person, for example, with weak nerves, who lives mostly within doors, must not be treated, under any disease, precisely in the same manner as one who is hardy and robust, and one who is much exposed to the open air.

The temper and mind ought to be carefully attended to in diseases. Fear, anxiety, and a fretful temper both occasion and aggravate diseases. In vain do we apply medicines to the body to remove maladies which proceed from the mind. When that is affected, the best medicine is to soothe the passions, to divert the mind from anxious thought, and to keep the patient as easy and cheerful as possible.

Attention ought likewise to be paid to the climate, or place where the patient lives, the air he breathes, and his diet. Such as live in low marshy situations are subject to many diseases which are unknown to the inhabitants of high countries. Those who breathe the impure air of cities have many maladies to which those who reside in the country are entire strangers. Persons who feed grossly, and indulge in strong liquors, are liable to diseases which do not affect the temperate and abstemious.

It has already been observed, that different occupations and situations in life dispose men to peculiar diseases. It is therefore necessary to inquire into the patient's occupation and manner of life. This will not only assist us in finding out the disease, but will likewise direct us in the treatment of it. It would be very imprudent to treat the laborious and the sedentary precisely in the same manner, even supposing them to labor under the same disease.

It will likewise be proper to inquire, whether the disease be constitutional; whether it has been of long



or short duration; whether it proceeds from any great or sudden alteration in the diet or manner of life.—The state of the patient's body, and of the other evacuations, ought also to be inquired into; and likewise whether he can with ease perform all the vital and animal functions, as breathing, digestion, &c.

Lastly, it will be proper to inquire to what disease the patient has formerly been liable, what medicines were most beneficial to him, and if he has a strong aversion to any particular drug.

As many of the indications of cure may be answered by diet alone, it is always the first thing to be attended to in the treatment of diseases. Those who know no better, imagine that every thing which goes by the name of medicine possesses some wonderful power or secret charm, and think, if the patient swallows enough of drugs, that he must do well. This mistake has many ill consequences; it makes people trust to drugs, and neglect their own endeavors; besides, it discourages all attempts to relieve the sick where medicines cannot be obtained.

Medicines are useful in their places; and when administered with prudence may do much good; but when they are put in place of every thing else, or administered at random, which is not seldom the case, they must do mischief. We would, therefore, wish to call the attention of mankind from the pursuit of secret medicines to such things as they are acquainted with. The proper regulation of these may often do much good, and there is little danger of their ever doing hurt.

Every disease weakens the digestive powers. The diet ought, therefore, in all diseases, to be light and of easy digestion. It would be as prudent for a person with a broken leg to attempt to walk, as for one in a fever to eat the same kind of food, and in the same quantity, as when he was in perfect health. Even abstinence alone will often cure a fever, especially when it has been occasioned by excess in eating or drinking.



Nor is a proper attention to diet of less importance in chronic than in acute diseases. Persons afflicted with low spirits, wind, weak nerves, and other hypochondrical affections, generally find more benefit from the use of solid food, and generous liquors, than from all the cordial and carminative medicines which can be administered to them.

Nor is the attention to other things of less importance than diet. The strange infatuation which has long induced people to shut up the sick from communication with the external air, has done great mischief. Not only in fevers, but in many other diseases, the patient will receive great benefit from having the fresh air prudently admitted into his chamber.

Exercise may likewise in many cases be considered as a medicine: sailing, or riding on horseback, for example, will be of as much service in the cure of consumptions, &c. as any medicines yet known. In diseases which proceed from a relaxed state of solids, the cold bath, and other parts of the gymnastic regimen, will be found equally beneficial.

Few things are of greater importance in the cure of diseases than cleanliness. Many diseases may be cured by cleanliness alone; most of them may be mitigated by it, and in all of them it is highly necessary both for the patient and those who attend him.

Many other observations, were it necessary, might be adduced to prove the importance of a proper regimen in diseases. Regimen will often cure diseases without medicine, but medicine will seldom succeed where a proper regimen is neglected. For this reason, in the treatment of diseases, we have always given the first place to regimen. Those who are ignorant of medicine may confine themselves to it only. For others who have more knowledge, we have recommended some of the most simple and approved forms of medicine in every disease. These, however, are never to be administered but by people of better understanding; nor even by them without the greatest precaution.

## GENERAL OBSERVATIONS ON FEVER.

Fevers, though the most common complaints, are those in which physicians, as well as all others, are most apt to be misled. This difficulty proceeds from the variety of the symptoms which enter into the character of a fever; the opposition of many of them to each other in different stages of it; and the occasional absence of some, that, in some instances, appear to constitute its leading features. There are, also, two other difficulties which a physician has to contend with in laying down a clear and plain survey of fevers; namely, their division or arrangement, and their names. The usual division of fevers is into intermittents, and continued, on account of their taking up different lengths of time in their natural duration; but with considerable propriety they may be divided into three classes, namely: intermittent, remittent, and continued. Intermittents consist of a number of paroxysms, following each other in a regular succession, at some length of time apart. Remittents are those in which another paroxysm comes on immediately after the former one has subsided, but not sufficient to leave the patient entirely clear of fever. Continued fevers are those in which there is such a quick succession of paroxysms that one comes on before there is any visible abatement in the appearance of fever.

Two very opposite states of the human body are supposed to give rise to fevers and to form their great and fundamental distinctions. The one is called the *phlogistic diathesis*, which means the inflammatory disposition of the body, wherein the heart is excited to rapid and vigorous exertions, manifested by great strength in the action of the vessels, while the blood itself exhibits a more florid color and denser texture than usual. In the other, the brain and the nervous system are more directly affected, their energy seems lessened, the force of the heart and vessels is diminished, the blood is of a loose texture, and the fluids tend to disso-

lution. In the first state, when the inflammation originates from external causes, such as wounds, bruises, or burns, the fever follows the local affection, and is in proportion to the degree of inflammation in the part affected. Such fevers are called symptomatic.

This is also the case in certain disorders of the lungs, and other viscera, which arise, not from external injuries, but from some vice in the part, which gradually brings on inflammation and fever. If the local inflammation be removed, the fever is removed also; if it cannot be subdued, but increases gradually, destroying the organization of the part, the patient dies sometimes by the violence of the fever, and sometimes merely because an organ, essential to life, is destroyed. Cold is found by universal experience, to give a disposition to inflammatory disorders, and heat to those called putrid.—During the winter, and early in the spring, pleurisies, peripneumonias, quinsies, rheumatisms, inflammatory fever prevails. Towards the end of summer, and particularly in autumn, fevers of a different nature, with dysenteries, and putrid ulcerous sore throats, make their appearance. Although cold generally causes inflammatory diseases, yet, persons who take violent exercise in sultry weather, or who accidentally fall asleep on the ground, exposed to the beams of the mid-day sun, are sometimes seized with fevers of a highly inflammatory and dangerous quality; the inflammation directly affecting the brain itself, or its membranes.

The time, in which intermittents and remittents are most prevalent, is the end of summer and beginning of fall, when heat and moisture combine to hasten the corruption of animal and vegetable substances, and fill the atmosphere with the particles that rise from such corrupted substances. These considerations reduce it next to a certainty, that nothing essentially connected with a marshy soil produces fever, and we can suppose nothing with so much probability, as the effluvia of stagnant water and corrupting animal and vegetable substances. And if a certain stoppage of perspiration, from the cold of autumn, after the body is relaxed by the heat of summer, be sufficient of itself to produce



fever in dry countries where the air has a free and uninterrupted circulation, and is not made impure by the corruption of vegetable matter of marshy lands, we cannot be surprised to find them far more universal and more obstinate in low marshy soils, where both these causes are combined.

A still more active source of fevers is the effluvia from the living human body, which, when long confined, becomes in the highest degree acrimonious, and gives rise to diseases the most dangerous and fatal. Whenever numbers of people are crowded together, the air must be deprived of its vital ingredient by repeated respiration; hence, this infectious matter will be formed, but with most rapidity in jails, in hospitals, in the holds of ships, and in dirty dwellings, where its poisonous tendency is hastened by nastiness, by unwholesome food, by desponding thoughts, or by the effluvia coming from bodies in a diseased state. It communicates its infection, not only to those who approach the places in which it is generated, and the human body from which it flows, but also will remain long entangled in beds, blankets, and other articles having been in contact with the patient's body, retaining its activity, and capable of infecting others at a considerable distance of time and place, if, unhappily, those corrupted materials be carried abroad. In this manner, one person who is not himself infected, may infect another; the first person, in such cases, being less predisposed to the disease than the second.

Although the infection arising from the living human body, is not perceived to act at a great distance from its direct source; yet it seems most probable that it does not immediately lose its poisonous qualities; but after it is diffused in the atmosphere, continues in some degree to act in conjunction with the effluvia of the decayed substances of marshes, with heat, obstructed perspiration, and the other causes of fever, and, according to the various proportions of those causes, combined with the circumstances of the season, climate, and the constitution of the patient, the nature of the fever is determined.



*Causes of Fever.*—As more than one-half of mankind is said to perish by fevers, it is of importance to be acquainted with their causes. The most general causes of fevers are—infection, errors in diet, unwholesome air, violent emotions of the mind, excess or suppression of usual evacuations, external or internal injuries, and extreme degrees of heat or cold. As most of these have already been treated of at considerable length, and their effects shown, we shall not now resume the consideration of them, but shall only recommend it to all, as they would wish to avoid fevers and other fatal diseases, to pay the most punctual attention to these articles.

Fevers are not only the most frequent of all diseases, but they are likewise the most complex. The distinguishing symptoms of fever are—increased heat, frequency of pulse, loss of appetite, general debility, pain in the head, and a difficulty in performing some of the vital or animal functions. The other symptoms usually attendant on fevers, are nausea, thirst, anxiety, delirium, weariness, wasting of the flesh, want of sleep, or the sleep disturbed and not refreshing.

When the fever comes on gradually, the patient generally complains first of languor, or listlessness, soreness of the flesh or the bones, heaviness, of the head, loss of appetite, sickness, with clamminess of the mouth; after some time come on excessive heat, violent thirst, restlessness. &c.

When the fever attacks suddenly, it always begins with an uneasy sensation of excessive cold, accompanied with debility and loss of appetite; frequently the cold is attended with shivering, oppression about the heart, and sickness at stomach, or vomiting.

Our design is not to institute a critical inquiry into the nature and immediate causes of fever, but to mark its most obvious symptoms, and to point out the proper treatment of the patient with respect to his diet, drink, air, &c. in the different stages of the disease.

Almost every person in a fever complains of great thirst, and calls for drink, especially of a cooling nature. This at once points out the use of water, and other

cooling liquors. What is so likely to abate the heat, promote perspiration, increase the quantity of urine, and, in short, produce every salutary effect in an ardent or inflammatory fever, as drinking plentifully of water, thin gruel, or any other weak liquor, of which water is the basis? The necessity of diluting liquors is pointed out by the dry tongue, the parched skin, and the burning heat, as well as the unquenchable thirst of the patient.

Inflammatory fevers, where the thirst is great, the following forms a grateful and cooling beverage:

The cream of tartar, half an ounce.  
White sugar, four ounces.  
Fresh confection of orange, three ounces.  
Hot water, three pints.

Half a pint or more may be drank as occasion requires. [Or,

Carbonate of ammonia, one drachm.  
Rain or river water, three ounces.  
Strong vinegar, enough to neutralize the ammonia.  
Mix, and as soon as effervescence ceases, add  
Sweet spirits of nitre, two drachms.  
Antimonial wine, one drachm.  
Syrup of lemon, one ounce.

After the ingredients are well mixed, a table-spoonful may be taken every hour, until the fever abates.]

Many other cooling liquors, which are extremely grateful to patients in a fever, may be prepared from fruits, as decoctions of tamarinds, apple tea, orange whey, and the like. Mucilaginous liquors might also be prepared from marshmallow roots, linseed, lime-tree buds, and other mild vegetables. These liquors, especially when acidulated, are highly agreeable to the patient, and should never be denied him.

*Symptoms of Fever.*—At the beginning of a fever, the patient generally complains of great lassitude or weariness, and has no inclination to move. Lying in bed abates the violence of the circulation, and gives

nature an opportunity of exerting all her force to overcome the disease. Confinement to bed alone would often remove a fever at the beginning; but when the patient struggles with the disease, instead of driving it off, he only fixes it the deeper, and renders it more dangerous. This observation is too often verified in travellers, who happen when on a journey to be seized with fever. Their anxiety to get home, induces them to travel with the fever upon them; which conduct seldom fails to render it fatal.

In fevers, the mind as well as the body should be kept easy. Company is seldom agreeable to the sick.—Indeed every thing that disturbs the imagination increases the disease: for which reason every person in a fever ought to be kept perfectly quiet, and neither allowed to see nor hear any thing that may in the least affect or discompose the mind.

Though the patient in a fever has the greatest inclination for drink, yet he seldom has any appetite for solid food: hence the impropriety of urging him to eat, is evident. Much solid food in a fever is every way hurtful. It oppresses nature, and, instead of nourishing the patient, serves only to increase the disease.—What food the patient takes, should be in small quantity, light, and of easy digestion. It ought to be chiefly of the vegetable kind, as panada, roasted apples, gruels, and such like.

Nothing is more desired by a patient in a fever, than fresh air. It not only removes his anxiety, but cools the blood, revives the spirits, and proves every way beneficial. Many patients are in a manner stifled to death in fevers for want of fresh air; yet such is the unaccountable infatuation of most people, that the moment they think a person in a fever, they imagine he should be kept in a close chamber, into which not one particle of fresh air must be admitted. Instead of this, there ought to be a constant stream of fresh air into a sick person's chamber, so as to keep it moderately cool. Indeed, its degree of warmth ought never to be greater than is agreeable to one in perfect health.

Nothing spoils the air of a sick person's chamber, or

hurts the patient more, than a number of people breathing in it. Air that has been breathed repeatedly will greatly increase the disease. Such air not only loses its spring, and becomes unfit for the purpose of respiration, but acquires a noxious quality, which renders it in a manner poisonous to the sick.

In fevers, when the patient's spirits are low and depressed, every method should be taken to cheer and comfort the mind.

It is a common notion, that sweating is always necessary in the beginning of a fever. When the fever proceeds from obstructed perspiration, this notion is not ill-tounded. If the patient only lie in bed, bathe his feet and legs in warm water, and drink plentifully of warm water-gruel, or any other weak, diluting liquor, he will seldom fail to perspire freely. The warmth of the bed, and the diluting drink, will open the pores, and promote the perspiration, by means of which the fever may often be carried off. But instead of this, the common practice is to heap clothes upon the patient, and to give him things of a hot nature, as spirits, spiceries, &c. which increase the disease, and render it more dangerous.

When a patient is recovering from a fever, great care is necessary to prevent relapse. Many persons, by too soon imagining themselves well, have lost their lives, or contracted other diseases of an obstinate nature.—As the body after a fever is weak and delicate, it is necessary to guard against catching cold. Moderate exercises in the open air will be of use, but great fatigue is by all means to be avoided. Agreeable company will also have a good effect. The diet must be light, but nourishing. It is dangerous, at such a time, to eat as much as the stomach may crave.

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## INTERMITTENT FEVERS, OR AGUES.

1. Intermitting fevers afford the best opportunity both of observing the nature of a fever, and also the effects



of medicine. No person can be at a loss to distinguish an intermittent fever from any other, and the proper medicine for it is now almost universally known. The several kinds of fevers of this description take their names from the period the paroxysm returns, as quotidian, tertian, quartan, and quintan.

2. The generic character of an intermittent fever consists of periods or paroxysms, between each of which there is a perfect interval when no fever is present. They admit of several distinctions, as *true*, *spurious*, *perfect*, and *imperfect*. The true and perfect intermittents which occur are—1. The *Quotidian* or daily, having an intermission of twenty-four hours. 2. *Tertian*, or third day, forty-eight hours.—3. *Quartan*, or fourth day, seventy-two hours. When the return of an intermittent exceeds the latest of these times, and is irregular, it is termed erratic or wandering. The other distinctions are of no practical utility, the means of cure being the same.

3. It is generally acknowledged, that *marsh miasmata*, or the effluvia arising from stagnant water, or marshy ground, when acted upon by heat, are the most frequent cause of this fever. This is evident from their abounding in rainy seasons succeeded by heat, and being most frequent in countries where the soil is marshy, along the borders of the water-courses, and in the neighborhood of ponds. Marsh effluvia, however, are not the sole cause of intermittents, since it is found that persons residing constantly in the most healthy part of cities, and far remote from marshes, are not unfrequently attacked by them. Debility, however induced, a poor watery diet, damp houses, exposure to evening dews, lying upon damp ground, watching, fatigue, and depressing passions of the mind, are, all of them, frequent causes of the disease. When the inhabitants of a high country remove to a low one, they are generally seized with intermittent fevers, and to such persons the disease is most apt to prove fatal. In a word, whatever relaxes the body, diminishes the perspiration, or obstructs the circulation in the capillary or small vessels, disposes the body to agues.

4. The paroxysm of an intermittent consists of four successive stages, viz: its access, a cold, a hot, and a sweating stage.

5. *Access.*—An intermittent is generally ushered in with pain in the head and loins, weariness of the limbs, stretching, yawning, with sometimes great sickness and vomiting. To these symptoms, after an interval of indefinite duration, succeeds—

6. *The Cold Stage.*—The extremities become cool; the skin pale and contracted; the pulse small, frequent and somewhat corded; the general sensibility is much diminished; tremors come on, and, finally, violent shaking; with suppression of all the secretions.

7. *The Hot Stage.*—After a longer or shorter continuance of shivering, the heat of the body gradually returns; irregularly at first, and by transient flushes, soon, however, succeeded by a steady, dry, and burning heat, considerably augmented above the natural standard. The skin, which before was pale and constricted, becomes now swollen, tense and red, and is remarkably sensible to the touch. The sensibility, diminished in the cold stage, is now preternaturally acute; pains attack the head, and flying pains are felt over various parts of the body. The pulse is quick, strong, and hard; the tongue white, the thirst great, and the urine is high colored.

8. *The Sweating Stage.*—A moisture is at length observed to break out upon the face and neck, which soon becomes universal and uniform. The heat falls to its ordinary standard; the pulse diminishes in frequency, and becomes full and free; the urine deposits a sediment; the bowels are no longer confined; respiration is free and full; all the functions are restored to their natural order—when, after a specific interval, the paroxysm returns, and performs the same successional evolutions.

9. Intermitting fever in temperate latitudes, under proper regimen, will frequently go off without medicine; and when the disease is mild, in an open, dry country, there is seldom any danger in allowing it to take its course; but when the patient's strength seems to decline,

or the paroxysms increase in violence, or the regular period of the paroxysm is anticipated, remediate measures ought to be immediately resorted to. It is always an unfavorable circumstance when the intervals between the paroxysms become shorter, as there is danger of the fever assuming the remittent or continued type; on the contrary, it is a favorable omen when the exacerbation is postponed or the intervals become longer.—When the elements of the disease are regularly developed, that is, when the different stages follow each other with perfect regularity, a favorable issue may generally be confidently anticipated.

10. The general character of intermittents is subject to certain modifications, which, as they have an important bearing in a practical point of view, are necessary to be understood. For all useful purposes, the following division is, perhaps, the best, viz: "1. The Inflammatory; 2. The Congestive; 3. The Gastric; and 4. The Malignant Intermittents."

11. In the inflammatory species, the intermission is generally very short. Notwithstanding there may be profuse perspiration in the last stage, the apyrexia does not become complete; the pulse remaining quick, tense and accelerated; with a dry, warm skin, and considerable thirst; attended with slight head-ache, and transient pains in the extremities and back. The pulse is remarkably strong, hard and full in the hot stage, and the heat of the surface is so intense that the patient expresses himself as though he were burning. This species occurs most frequently in winter and spring.

12. Congestive intermittents are more frequently met with in the Mississippi Valley than in other parts of the United States. "They are characterized by a very protracted cold stage, deep-seated pain in the head, vertigo, fainting, a sense of weight or oppression in the breast, coma, a small weak pulse; the hot stage coming on very slowly, and developing itself very imperfectly—the skin is scarcely warm, the countenance pale and contracted, the breathing confined and anxious, and the pulse frequent, small and tense, with an internal sensation of heat."

13. Gastric intermittents are characterized by great irritation of the stomach and bowels; a foul and bitter tongue; much nausea and vomiting of billious matter; great pain in the forehead; purging of watery matter, occasionally mixed with bile; yellowness of the skin and eyes, and saffron colored urine. The patient has great thirst for sour drinks, and complains much of pain under the lower ribs of the right side.

14. Intermittents of the malignant grade are confined generally to hot climates. They are distinguished by copious, fetid perspiration in the third stage; hemorrhages from various parts of the body, with red blotches under the skin. It is frequently called *spotted intermittent*; runs its course with great rapidity, and is the most dangerous of all intermittents; in fatal cases the patient usually dying in the third paroxysm.

15, To these may be added many anomalous affections, which assume a strictly periodical character, although they do not perceptibly run through the regular stages of an intermittent fever. They are known as *masked* or *dumb agues*; and will generally yield to the use of the same remedies which are found to arrest a regular intermittent. Acute pains in various parts of the body, rheumatism of the eye and of the hip, headache, toothache, dysentery, hiccough, cramp in the stomach, mania, and many other affections are often periodical in their appearance, and may be successfully treated in the same way.

16. *Treatment.*—The first thing to be done in every fever, is to remove the remote cause of the disease, if it can be ascertained; or, if it be of such a character as to forbid removal, to protect the patient from its influence as much as possible; for a disease cannot be cured if the cause giving rise to it continues to exercise its deleterious influence over the sick. If the fever be occasioned by fatigue, cold, depressing passions, or similar causes, the appropriate means of protection will suggest themselves to every mind. If from the effluvia generated in marshes or ponds, remove the patient from their influence by placing him in an upper apartment; for experience has abundantly shown, that the foul air generated



in such situations never rises so high as the second stories of houses. If, however, it be not convenient to remove him from the lower floor, keeping the doors and windows closed on the side of the building exposed to low, damp grounds, will afford very adequate protection.

17. The treatment of this disease is naturally divided, first, into that proper during the intermission, and upon which the radical cure depends; and second, the means to be employed during the paroxysm, in endeavoring to shorten it, and induce the fourth or secreting stage.—The principal object, therefore, is to equalize the circulation and consequently to restore the secretions; which is to be accomplished by putting a period to the stage which is present, and hastening that which naturally succeeds it. During the intermission our endeavors are to be directed towards breaking up the train of morbid action giving rise to the paroxysms, and keeping the secretory organs in healthy action.

18. In the forming stage, or access, *emetics* are often of signal benefit. If taken in such a manner as to vomit immediately, without producing much nausea, an emetic will, in a great majority of instances, put a speedy termination to its progress. The best remedies for this purpose are, full doses of ipecacuanha or sulphate of zinc (white vitriol.) Of the former, from twenty to thirty grains may be given, (according to the age of the patient,) mixed in half a pint of warm water, of which he may drink one-fourth every five minutes until vomiting is induced. During this action, the stomach should be kept distended with warm water or weak chamomile tea. From ten to twenty grains of the sulphate of zinc may be dissolved in half the quantity of water, and given in the same manner. Where these remedies are not convenient, a very strong solution of common salt in water, or of the flour of mustard, will answer the purpose very well. If the emetic does not act immediately, copious drafts of tepid water must be taken without delay, and the fauces be irritated with a feather. These means will rarely fail to produce the desired effect.—Nausea or purging at this period, by weakening the action of the vascular system, would have a tendency to

promote internal congestion, and add to the violence of the paroxysm.

19. Much benefit may be derived in some cases from the administration of stimulants in anticipation of the cold stage. For this purpose a powder composed of six grains of cayenne pepper and two scruples of powdered bayberries, given in pills or mucilage, has often had the happiest effect. Tincture of myrrh, ether, brandy, and the various preparations of ammonia, have all been used to fulfil this indication with advantage. Riding a hard trotting horse, walking briskly, or violent exercise of any kind, will, in a majority of instances, have the same effect. Where the system is not too much debilitated to forbid the attempt, the affusion of cold water, just before the beginning of the chill, will often induce reaction and ward off the paroxysm. Care and judgment, however, are requisite in the use of these remedies; for, if they fail in producing the desired result, they will seldom fail to do injury by increasing the paroxysm. Cold affusion in the stage of access, ought never to be attempted except the patient be of a full habit of body, and appears to possess sufficient vital energy to insure reaction.

20. *Cold Stage.*—Various remedies have been exhibited for the purpose of curtailing the cold stage, and most of them with benefit in particular instances; but those only which may be used in the generality of cases, need be mentioned in a work of this character.

21. Emetics may be employed in most cases with advantage. Those already named as proper in the access, are to be preferred. Given just before, or immediately after, tremors commence, an emetic will rarely fail to bring on reaction, and put a speedy termination to the fit, by breaking up the chain of morbid action and equalizing the circulation. In debilitated and relaxed habits, where vomiting might be dangerous, full doses of opium (1 to 2 grains) administered just before the chills comes on, will prove decidedly beneficial. Opium, however, as well as other stimulants, are to be avoided in persons of a plethoric and vigorous habit of body; as much benefit could not be expected from them, and they

would do injury by increasing the violence of the reaction and of the determination to the brain in the hot stage. In such cases, also, much external warmth will render the hot stage more intense, without relieving in the slightest degree the chilliness experienced after the depression is fully set in. An opposite practice is necessary in weak and debilitated persons, where the powers of reaction are feeble, rendering the development of the succeeding stage tardy and incomplete.—Here, both internal and external stimulation may be used to the extent necessary to prevent fatal prostration, and to lift the patient into the hot stage. These indications may be fulfilled by hot applications to the extremities and around the body, such as bags of hot corn or of salt; hot bricks enveloped in flannel; bladders of hot water applied to the pit of the stomach; frictions with coarse woollens or the flesh brush; mustard draughts, or even blisters applied to the ankles and wrists. Among the best internal stimulants are, sulphuric ether, which may be given in doses of a teaspoonful, mixed in cold water, every forty minutes; the carbonate of ammonia, in five grain doses, commencing just before the chill sets in, and repeated in half an hour if reaction has not come on; wine-whey; brandy toddy; and ginger tea.

**22. HOT STAGE.**—All fevers in this country are more or less of an inflammatory character at the beginning; consequently, bloodletting is indicated in most cases, especially if they be recent, where medical assistance is required at all. After the accession of the hot stage, if the excitement runs high, blood should be immediately drawn from the arm, to the full extent of reducing the pulse. A sufficient bleeding will seldom fail to relieve entirely the pains in the head and back; calm tumultuous febrile action; reduce the system to the secreting point; and obviate the tendency to visceral inflammation and congestions. In the inflammatory variety of ague, the bleeding may be repeated as often as the pulse, by continuing strong, hard and full, in succeeding paroxysms, may indicate it. In many cases, after bloodletting has been carried to the extent named, gentle perspiration will come on, and gradually increase



until a period is put to the hot stage. This course of things may be promoted by the administration of gentle diaphoretics, such as warm balm tea, a decoction of thoroughwort, or small doses of a very weak solution of tartar emetic or of ipecacuanha.

23. When, however, the excitement is not reduced to the sweating point by bloodletting, or in cases where venesection is not deemed prudent, the patient should be allowed copious draughts of cold water, or of any cool, bland, acidulated drinks. Whatever prejudices may be entertained in regard to the use of cold water in fever, the most extensive experience testifies to its beneficial effects. Indeed, it is, when judiciously managed, often competent to the subduction of the disease itself. Nothing is more grateful to the patient than cold water, nor does the materia medica possess a more effectual febrifuge. If the skin be hot and dry, sponging the head, face, arms, and breast, or, indeed, the whole body, with cold water, or a mixture of vinegar and water, for twenty or thirty minutes, will, in most cases, entirely subdue all febrile action, and bring on the secreting stage, with perfect relief from all unpleasant symptoms. It would be worse than useless to sponge the body for a few minutes only. The tendency to reaction must be entirely overcome, or the excitement will return with augmented violence as soon as the cold applications are discontinued. When the patient experiences chilly sensations from the use of cold water, it should be discontinued immediately.

24. Minute portions of ipecacuanha, or of tartar emetic, are also valuable remedies in this stage. If the stomach can bear it, one grain of ipecac. or the eighth of a grain of tartar, may be given once an hour until the sweating stage is fully ushered in. The first of these articles is preferable in cases attended with a disposition to watery purgation—but where the bowels are sluggish, and free from inflammatory symptoms, with little or no disposition to act under the stimulus of ordinary purgatives, tartar will more effectually fulfil the indication.—A good method of exhibiting the tartar is, in combination with nitre. A mixture of two drachms of antimo-



nial wine to six of the sweet spirits of nitre, may be given in doses of a teaspoonful every hour. The "Spirit of Mindererus" (acetated solution of ammonia) has many advantages over its kindred medicines, as a diaphoretic, being more prompt, complete and certain in its operation, and more grateful to the stomach; and will be retained when all others are rejected. The dose is a teaspoonful every hour while the hot fit lasts.

25. Opium, exhibited half an hour after the commencement of the stage of excitement, has been highly recommended by Dr. Lind and other physicians of eminence. It is stated, that thirty or forty drops of laudanum given at that time, will effectually calm the anxiety and headache, shorten the stage, and render the paroxysm more regular. It may be beneficially employed in lax constitutions, but cannot be recommended in other cases. In fact it is always better to depend on other means, and not resort to it, except under the advice of a physician, or when every thing else has failed.

26. As soon as the sweating stage begins, cold drinks must be withheld, and tepid ones substituted. One of the best that can be used, at this period, is, a tea made of the leaves and flowers of the eupatorium perfoliatum (thoroughwort, boneset.) A teacupful of it may be taken every half hour until the intermission is complete. Barley water, mint and balm teas, and similar articles, may also be given with advantage throughout this stage.

27. In cases attended with obstinate vomiting in either the cold or hot stage, a solution of camphor in sulphuric ether, (two scruples of the former to one ounce of the latter,) may be exhibited in doses of twenty or thirty drops, with ten grains of magnesia, every half hour. One or two doses will generally give entire relief. Lime water, in doses of a tablespoonful every twenty minutes, is also an admirable remedy in such cases. When the vomiting occurs in the cold fit, much benefit may be derived from the application of a mustard poultice over the pit of the stomach. The poultice should be mixed with simple water, without the addition of vinegar.

28. Where there is much acidity of the stomach present, a solution of the carbonate of potash, (two drachms to a pint of water,) in doses of a tablespoonful every thirty minutes, will generally afford relief, and also facilitate the action of purgatives. The ley of wood ashes may be advantageously employed in the same circumstances.

29. It should be borne in mind, that whatever advantage may have been gained by the administration of remedies during the paroxysm, it is upon the course pursued in the intermission that the radical cure of the disease depends.

30. Few cases of fever occur without exhibiting unequivocal manifestations of biliary derangement. It is less frequently met with in mild intermittents, perhaps, than in fevers of any other grade; yet, most cases of this description absolutely require the use of such remedies as are calculated to evacuate the liver and its associate organs, and almost every case would be benefited by them. The use of emetics has already been referred to. Cathartics are to be principally relied on for the purpose under consideration, and merit the most serious consideration; for the judicious use of them has often, instead of benefiting the patient, increased the malady, and changed it from a simple intermittent into a remittent or continued fever.

31. In the use of purgatives, particular attention must be paid, 1st. to the condition of the alimentary canal, as, whether it be irritable and easily excited to action, or torpid and difficult to arouse—2d, to the period at which they are administered—3d, to the time usually required for the article exhibited to act—and 4th, to the kind of evacuations ordinarily produced by the medicine.

32. Such cathartics only should be selected as produce, either alone, or in combination with others, consistent bilious evacuations; and it may be laid down as a rule, admitting of no exception, that they should be administered in the intermission, in such a manner as to act during the stage of excitement. The proper time for giving a purgative is about two or three hours before

the chill is expected to come on. By this course two very important advantages are gained:—the stimulating effects of the medicine will be spent at a time when most serviceable in assisting to ward off the chill; and its cathartic operation secured during the hot stage, when the system is better able to bear evacuations, which, at that period, will aid greatly in diminishing the excitement, relieving congestion, and shortening the paroxysm. Some of the most able practitioners in miasmatic districts, have abandoned the use of tonics entirely, and rely alone on stimulating purgatives for stopping the chill, and with great success. With this intention, in ordinary cases, a combination of fifteen grains of calomel, ten of aloes and ten of rhubarb, may be given either in powder or pills. If, however, great irritability of the stomach exists, twenty grains of calomel may be given alone, and recourse be had to the remedies already referred to for relieving the stomach. The calomel itself will assist much in quieting gastric derangement

33. When there is much torpor of the bowels, more active cathartics may be exhibited in combination with calomel—as jalap, scammony, colocynth, or gamboge. The extract of white walnut is also an excellent purgative, and to be preferred before the others named, in cases where the stomach is not affected. If, from any cause, calomel cannot be prudently administered, pills composed of equal parts of aloes, rhubarb, and the sulphate of iron, or the walnut extract, are the best substitutes.

34. When there is much danger in procuring evacuations, the action of the medicine may be promoted by nauseants, bleeding when the pulse will bear it, and stimulating injections. Castor oil, senna tea, or a solution of the carbonate of potash, may also be advantageously used in such circumstances. When watery passages occur, if the medicine previously given be calculated to produce them, its further use should be abandoned, and recourse be had to others less likely to have that effect, keeping in view the indication to be fulfilled.

35. A great variety of tonics have been recommend-

ed in this disease; but, by general consent, Peruvian bark and its preparations stand at the head of the list. The bark in substance is now seldom given in this country, the sulphate of quinine being preferred, both on account of the size of the dose and the likelihood of its being retained by the stomach. Much controversy has arisen among physicians respecting the proper period for the exhibition of quinine. The course, however, most usually pursued in the United States, and certainly with as much success as any other, is to commence about six hours before the chill is expected to come on, with one or two grain doses, and continue them every hour until the period for its appearance has elapsed two or three hours. If the paroxysm does not occur, the quinine may be continued in the same doses night and morning, for several days, taking care to keep the bowels open with some of the purgatives already named. "The most convenient and elegant formula for exhibiting the quinine, is perhaps, the following:

Take	Sulphate of quinine, sixteen grains.
	Elixir vitriol, sixteen drops.
	Lemon syrup, one ounce.

Mix.—Dose—A teaspoonful every hour for an adult."

36. "As this mixture, though a very neat and concentrated one, is sometimes objected to on account of its bitterness, especially by children. I have generally prescribed it according to the following formula, by which almost all the bitterness is wholly removed:

Take	Sulphate of quinine, six grains.
	Elixir vitriol, ten drops.
	Extract of liquorice, 1 1-2 drachms.
	Water, two ounces.

Mix.—Dose—A teaspoonful for a child between two and five years of age."

37. In obstinate cases the quinine may be united with an equal part of the carbonate of ammonia, or of piperine, and administered in the same doses. I have seen cases yield to this combination, which had resisted the quinine alone, although faithfully persevered in for



a considerable length of time. Small doses of magnesia combined with quinine is said, by a late writer, to add greatly to its efficacy. If the quinine should have a tendency to purge, about the time for the accession of the chill, it may be combined with small doses of Dover's powder, or opium.

38. When there is activity of the pulse, with pain in the region of the liver and spleen, and other febrile symptoms, the bark, in every shape, is inadmissible.—Emetics, if they can be borne, with purging and blistering, will generally remove at the same time both the fever and the visceral obstructions.

39. The United States are affluent in articles suited to the treatment of this disease. Of these the *aristolochia serpentaria*, (black snake root,) has the highest reputation. Dr. Chapman says, "that combined with bark it adds to its efficiency; and in many cases this combination will cure when bark alone cannot effect that purpose. The efficacy of the following combination, when all others have failed, is well ascertained:

Take	Peruvian bark, half an ounce.
	Black-snake root, in powder, one drachm.
	Carbonate of potash, thirty grains.

Mix, and divide it into four equal powders, and take one every four hours."

40. *Eupatorium perfoliatum* (boneset) has been already referred to. It possesses extraordinary powers; and may be so managed as to produce emetic, diaphoretic, and tonic effects. It may be used in every stage of intermittents, and is particularly servicable when the intermission is not complete. For its tonic effects it must be given during the intermission in the form of a strong decoction, after it is cold, or in powder. Dose of the powder, twenty grains; of the decoction, a wine-glassful every hour or oftener.

41. The barks of the wild cherry-tree, the black alder, the different species of oak, the American poplar, and the dogwood tree, have all been used with advantage where the Peruvian bark was indicated. Of these the *dogwood* merits most attention. It is considered by

many as not at all inferior to the bark. It may be given in doses of one or two drachms of the powdered bark every two hours, beginning at the period recommended for the exhibition of the quinine. A salt has recently been prepared from it, the nitrate of cornine, from one to two grains of which is a dose, and is preferable to the powder.

42. The *tela araneorum* (spider-web) has been used by Drs. Jackson and Chapman, in doses of four grains, made into a pill with gum arabic, and administered every two hours during the intermission. That used is collected in cellars, and is the product of the black spider. It is spoken of in the highest terms. Dr. Eberle says, "It certainly possesses very considerable powers in allaying morbid irritability, and in calming the excitement both of body and mind. In my own person, it produces the most delightful state of mental and corporeal tranquility, far exceeding that which is caused by opium."

43. Among the mineral remedies, *arsenic* and the *sulphate of zinc* are the most valuable. Arsenic is considered by many as a specific in the worst cases of this disease. It forms the basis of most of the nostrums sold under the name of "ague drops." *Fowler's solution* is the best form in which it can be given. It may be administered with perfect safety to persons of every age, commencing with from four to six drops for an adult, and gradually increasing it to ten drops three times a day. It is best to take it immediately after meals. Its use is contra-indicated in persons of a very thin, weak habit of body.

44. The *sulphate of zinc* is a valuable remedy for the cure of agues, and has often succeeded where the quinine has failed. It may be prepared in the following manner:

Take	Sulphate of zinc, ten grains.
	Red pepper, in powder, two scruples.
	Conserve of roses, a sufficient quantity.

Mix—and divide the mass into forty pills; one to be taken every two hours during the intermission.

45. As autumnal and winter intermittents generally prove more obstinate than those which attack the patient in spring and summer, it will be necessary to continue the use of medicine longer in the former than in the latter. A person who is seized with intermitting fever in the beginning of winter, ought frequently to take such medicine as will keep the liver and bowels in action, although the disease may seem to be cured.—Nothing is more certain to bring on a relapse than costiveness.

46. When agues are not properly cured, they often degenerate into obstinate chronic diseases, as dropsy, jaundice, and indurations of the liver and spleen. For this reason, all possible care should be taken to have them radically cured before the constitution has been too much weakened.

47. Though nothing is more rational than the method of treating intermitting fevers, yet, by some strange infatuation, more charms and whimsical remedies are daily used for removing this than any other disease.—There is scarcely an old woman who is not in possession of a nostrum for stopping an ague; and it is singular to see with what readiness their pretensions are believed. Those in distress eagerly grasp at any thing that promises sudden relief, and a single case of the disappearance of the disease, under the occult influence of charms and amulets, will more than counterbalance a thousand failures, in the estimation of the superstitious. The only method, however, to obtain a safe and lasting cure, is to assist nature in removing the malady by the use of medicine.

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REMITTENT FEVER.—BILLIOUS FEVER.

48. This fever takes its name from a remission of the symptoms, which happens sometimes sooner and sometimes later, but generally before the eighth day, but without any distinct intermission. There is no essential difference between remittents and the common



autumnal intermittents; as they arise from the same causes (3) often run into each other, and are cured by the same remedies. They differ only in grade of violence and duration of the paroxysms. But, as they require a distinct method of treatment, they ought not to be confounded.

49. *Symptoms.*—As in intermittent fever, the disease is usually ushered in with yawning, stretching, a sensation of cold, nausea, or bilious vomiting. To these succeed thirst; pain of the head, back, and stomach; restlessness, difficulty of breathing, or oppression of the chest; extreme heat over the whole body; and not unfrequently partial delirium. The pulse is seldom full, but frequent and hard; the tongue is white and moist: with a yellowness very perceptible in the whites of the eyes, and occasionally over the whole body.

50. The symptoms, after a time, abate considerably, and a gentle moisture is diffused over the body; but there is no complete interval or freedom from fever: and perhaps in a few hours it returns with the same violence as before, or under an aggravated form.—After the continuance of a certain number of hours, varying in different subjects, this second fit wastes its force, and again remits; to which a third accession of the usual symptoms succeeds; and in this manner the disease proceeds, with fresh paroxysms and remissions, until the fever ceases wholly, or is changed into the intermittent or continued form.

51. Occasionally, slight chills are among the first symptoms of indisposition. At first they alternate with flushes of heat, which latter gradually increase in duration until they predominate wholly, and the febrile reaction is fully developed.

52. If the disease gains strength, or is very violent, the remission is scarcely obvious, and is immediately followed by another paroxysm, wherein all the symptoms are much aggravated; the tongue becomes dry and stiff; the mouth, teeth, and inside of the lips, are incrustated with a dark brown or black fur; the stools pass off involuntarily and are highly offensive; the pulse becomes quick, small, and irregular; the urine is retained



or passed with difficulty; and picking at the bedclothes, with starting of the tendons, and great incoherency ensue, which usually closes the scene.\*

53. It is impossible to describe all the symptoms of this disease, as they vary according to the year, the situation, and the constitution of the patient. They may likewise be greatly changed by the initial treatment, and by many other circumstances too numerous to mention. Sometimes the inflammatory symptoms predominate, sometimes the nervous, and sometimes the malignant or congestive. Nor is it at all uncommon to find them appear in rapid succession; or even a complication of them at the same time, in the same individual. But, whatever may be the grade of the disease, the liver and its associate organs are those most prominently affected.

54. *Diet.*—The regimen must be adapted to the prevailing symptoms. When there are any signs of inflammation, the diet must be of the most slender and unirritating kind, and the drinks weak and diluting.—Great caution must be exercised in regard to articles of a stimulating or heating character, as this fever is frequently changed into a continued one by improper diet and medicines.

55. Whatever the symptoms may be, the patient ought to be kept cool, quiet, and clean. His apartment, if possible, should be large, and frequently ventilated by letting in fresh air at the doors and windows. It may likewise be occasionally sprinkled with vinegar or lemon juice. His linen and bedclothes should be frequently changed, and all his evacuations immediately removed. Though these things have been mentioned before, it is thought necessary to repeat them here, as they are of more importance to the sick than practitioners are apt to imagine. Dr. Lind says, “I can affirm, that a physician who puts these in practice will much oftener succeed than one who is even more skilful, but has not opportunity of using these means.”

56. *Treatment.*—The indications to be fulfilled in

the treatment of this disease, are—to subdue the febrile reaction—to relieve the stomach and bowels of vitiated secretions or other irritating matters—and to restore the broken balance of excitement, and consequently the secretory organs to healthy action. All treatment at the beginning, must have for its object the bringing on of a regular, perfect intermission. After that is affected, the disease is to be treated in every respect as an intermittent.

57. At the commencement of the disease, blood-letting alone will often procure a complete intermission; or, when not competent to produce that effect, will moderate the excitement, relieve the inflammatory symptoms, and give indispensable aid to other remedies.

58. After blood has been drawn to the extent of moderating the febrile reaction, an emetic may be exhibited. In ordinary cases, emetic tartar is to be preferred, as being more likely to assist in establishing the secretions;—but where there is much nausea, vomiting, without the rejection of much fluids of any kind, with considerable thirst, and occasional watery stools, with loathing of food, evidencing great irritation of the mucous lining of the stomach and bowels, the tartar is inadmissible; and recourse must be had to ipecacuanha.

59. Venesection and emetics may be repeated at suitable intervals; but no general rule can be laid down in regard to these points, as each particular case is liable to many sudden and important variations. The symptoms present must always govern their exhibition. However, a full, tense pulse, with a flushed countenance, great heat of the surface, or violent pain in the head, will always demand the employment of the lancet.

60. Purgatives are necessary throughout the whole course of the disease. Mercurial purges are best; and are the only kind that can be relied on with safety. Full doses of calomel and jalap, (from ten to twenty grains of each,) or of calomel united with some other purgative (34. 35.) should be exhibited as early in the disease as practicable. If it does not act in a reasonable length of time, proportioned to its activity, it

may be repeated, or assisted by some more active medicines, or by injections. When the patient is distressed and prostrated by painful, watery stools, small doses of Dover's powder may be united with the calomel.—This is preferable to opium, on account of its being less liable to affect the head, and possessing at the same time considerable diaphoretic powers.

61. After having procured evacuations of the proper kind (34) they are to be kept up by the use of cathartics at suitable intervals, until they lose their dark, offensive character, and assume a more natural, healthy appearance. The fear of inducing debility by the continued exhibition of purgatives, which leads many persons to abandon them, to the irreparable injury of the patient, need not be entertained; for, instead of being weakened, the patient will always be conscious of an accession of strength after every passage of consistent, bilious matter—the only kind of purging to be solicited.

62. During the continuance of this treatment, several subordinate symptoms will claim attention. And first, of heat of the surface. Nothing is so effectual in relieving this as the affusion of cold water. It affords the most delightful sensation to the patient; produces a tendency to sleep; renders the pulse fuller, softer, and more uniform; the skin moist; and will often produce a distinct remission. When the excitement is great, the mouth and throat dry, and the thirst is urgent, cold water alone or saturated with cream of tartar when the bowels are not irritable, may be freely allowed.—Instead of postponing, it will aid the action of medicine (35). In cases of deep congestion, when the surface is rather cool and the sense of internal heat great, the southern physicians are in the habit of prescribing copious clysters of cold water, and even ice-water when it can be obtained, with the most prompt and signal relief.

63. If there be a strong determination to the head, the hair must be well removed. Nothing in many cases affords more relief than this simple expedient. But, if it does not succeed, have recourse to cold applications, as wet clothes or pounded ice; to which may be added,



topical depletion by means of cups or leeches. Bathing the feet and legs in warm water, will often have a good effect in such cases. Some physicians, instead of cold applications to the head prefer tepid ones, considering them less dangerous, and of superior efficacy in every respect.

64. Much difficulty frequently arises from nausea and vomiting, giving great distress to the patient, and causing the rejection of medicine. This may be caused either by a redundant secretion of bile, or by irritability of the stomach. In the first event, the evacuating remedies already named (61, 63,) will give relief.—Morbid irritability of the stomach may be quieted by occasional doses of the effervescing draught (*See Dispensatory*,) or, what is better, by lime-water or equal parts of lime-water and sweet milk united, of which a table-spoonful may be taken every twenty minutes. A tea-spoonful of the decoction of serpentaria is highly recommended by Dr. Kuhn in such cases. If none of these succeed, resort to bleeding if the pulse will bear it, sinapisms to the extremities, fomentations of brandy and cloves to the stomach, and, lastly, to blisters. I have found, when all other means had failed, a large dose of calomel quiet gastric irritation like a charm. It should be given mixed with water only. Advantage has also been derived, in such circumstances, from a table-spoonful of mulled wine taken every fifteen or twenty minutes. A very effectual method, in refractory cases, is to draw a blister, from an inch and a half to two inches in diameter, over the pit of the stomach, and, after the cuticle is removed, sprinkle from a fourth to half a grain of morphine on the abraded surface.

65. Under the treatment detailed, an intermission usually occurs in two or three days. If, however, it is not brought about in that length of time, recurrence may be had to emetics; and, if circumstances justify it, endeavor to make a strong impression on the system by the application of blisters to the extremities.

66. To moderate the general febrile excitement, recourse may be had to the usual antiphlogistic diaphoretics, such as the acetated solution of ammonia; the



saline mixture; sponging the body with cold water (25;) and the plentiful use of cool, acid drinks, such as tamarind-water, lemonade, apple-water, or currant jelly dissolved in water. When there is pain in the abdomen, with tenderness on pressure, minute portions of ipecacuanha and camphor (half a grain of the former to one grain of the latter,) will generally act on the skin and give relief. If the febrile reaction is not very violent, with much restlessness, anxiety, and a hot skin, and no determination to the brain, the following mixture may be advantageously exhibited:

Take    Acetated liquor of ammonia, seven ounces.  
           Sweet spirits of nitre, one ounce.  
           Laudanum, thirty drops.

Mix.—Dose—a table-spoonful every two hours.

67. When, from any cause, the lining membrane of the stomach and bowels “is brought into a high state of irritation, the disease loses its remittent form, and often assumes a low, typhoid character, with almost constant delirium, a tender swollen state of the abdomen, a dry, dark brown, or black crust on the tongue, with clean, red edges; watery and reddish stools; great prostration; and a very dry hot skin. Cases of this kind frequently run on for several weeks; and convalescence is always very gradual and tedious. In such cases the abstraction of blood from the abdomen by cups or leeches will afford much benefit. Fomentations to the abdomen with flannel wrung out of hot water will aid materially in reducing the intestinal affection; or, a large emollient poultice may be applied. Small doses of calomel and opium or Dover’s powder, are peculiarly serviceable in such cases. One grain of calomel and one-fourth of a grain of opium may be given every hour or two. Thin gruel and gum water may be occasionally taken, but no other food.

68. The use of balsam copaiva is very highly recommended by Dr. Eberle in such cases. He says, “I have so often seen the most decided benefit derived from this article, in protracted cases, attended with great irritation, or sub-acute inflammation of the bowels, that

I should consider myself as neglecting an important curative means, were I to omit prescribing it in diseases of this character. It may be given thus:

Take       Balsam copavia, half an ounce.  
              White sugar, half an ounce.  
              Powdered gum arabic, two drachms.  
Mix in a mortar, and then add  
              Water, two ounces.

Mix.—Take a spoonful every two hours.”

69. Various opinions have been expressed with regard to the propriety of exhibiting tonics during the remissions of this disease. Some of the most eminent physicians in this country, as well as in Europe and the West India islands, whose opportunities for experience have been ample, strenuously advise, the “vigorous exhibition of bark as soon as a considerable remission occurs in the disease.” Others again, with quite as much reputation and experience to support them in their views, “condemn this practice in terms of unqualified reprobation.” In the more violent remittents of this country, however, experience has, in the last few years, taught physicians, in the face of all theory, that the quinine, administered in large doses, and on the occurrence of the slightest remissions, is one of the most potent remedial agents that can be arrayed against the disease.

70. The following extract of a letter addressed by Dr. Thomas Fearn, of Alabama, to a friend in that State, and published in the “*Transylvania Journal of Medicine*,” will convey a general idea of the method of exhibiting it, and its effects on the system.

71. “In administering quinine in remittent fever, our practice has usually been to give three doses of twenty grains each, with an interval of an hour between; and this had never before been exceeded by me.” In the case he is speaking of, he says, “I waited through the night for the expected remission; and when I believed there was as near an approach to apyrexia as would occur, although the pulse still remained about one hundred in a minute, and the skin above the natural temperature, I gave him, at one dose, three tea-spoonfuls of

the medicine. At the end of one hour there was a diminution in the frequency of the pulse—the invariable effect of *large* doses of quinine when its operation is favorable. Another dose of similar size was now administered, and a still further reduction of the pulse was observed, at the end of the next hour, accompanied by a ‘ringing in the ears.’ The same dose was again repeated; making ninety-six grains in two hours.”

He states the effects of large doses to be “almost invariably to reduce the frequency of the pulse, sometimes from one hundred to sixty, and even to fifty in the minute; to produce perspiration, ringing in the ears, partial deafness, and in two or three instances blindness, or obscurity or confusion of vision. These effects have never been known by us to be permanent, or to continue longer than a few days.” “My opinion is, that it acts more as a narcotic than a sedative. In small doses it is most usually stimulant: but in large doses the stimulant effects are not obvious, if indeed they produce a sedative operation.”

72. The following remarks are extracted from an article in a recent number of the same journal, in which a number of cases, successfully treated by large doses of quinine, are detailed.

“If, before the stage of excitement is off, the quinine be administered in large doses, it will, in nineteen cases out of twenty, prevent collapse. And further, when the stage of excitement has passed off, and the patient is under the influence of quinine, the rhubarb and aloes will exert a greater influence over the biliary secretions than will calomel under other circumstances.

“Our remittents are frequently complicated with other diseases, which seem to preclude the use of quinine—but when these affections are evidently regulated by the remittent, aggravated in the exacerbation of fever, and moderated in the remission, they may be set down as symptomatic, and so treated.”

The quinine “should not be given in the cold stage, which we term the stage of oppression. Neither would I give it within two hours (would prefer four) next preceding that stage. In the reaction, when the fever is



yet rising, it should still be withheld; but when an approach to apyrexia is distinctly ascertained, the safety of the patient demands its exhibition.

The quantity should be regulated by the strength, or vital energy of the patient. If there be much prostration and torpor of the general system, mammoth doses. Smaller portions will do where the system can bring its own energies in aid of the remedy."

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## CONTINUED FEVERS.

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### SIMPLE CONTINUED FEVER.

73. This fever has generally been considered as a compound of the inflammatory and the milder species of typhus; symptoms of the former being apt to preponderate at its commencement and middle stage; but towards its termination those of a typhoid character, especially when the disease is of long continuance.

74. Although fevers of this type are called *continued*, and do continue for several days with nearly the same degree of violence, yet they have evident exacerbations and slight remissions daily, not so distinct, however, as to allow them to be classed with remittents.

75. Every thing having a tendency to enervate the system, may be set down as a remote cause of fever; and, accordingly, we find it resulting from great bodily fatigue, indulgence in sensual gratifications, violent exertions, intemperate eating and drinking, excessive evacuations, the suppression of long accustomed discharges, together with all the causes already enumerated when speaking of fevers in general.

76. It is the opinion of most physicians, that there is something in the nature of all acute diseases which usually determines them to be of a certain duration; consequently, these terminations, when salutary, happen at certain periods of the disease rather than at others, unless disturbed in their progress by improper treatment, or by the occurrence of accidental causes. These pe-



riods, from the time of Hypocrates to the present day, have been very generally admitted, under the name of *critical days*. The days on which it is supposed the termination of continued fevers generally occurs, are the third, fifth, seventh, ninth, eleventh, fourteenth, seventeenth, and twentieth. Although these periods are less distinctly marked in our diseases than we should be led to infer from the writings of the ancients, owing probably to the variableness of our climate interfering with the regular progress of the disease; yet every precautioner of enlarged experience, who has correctly watched the march of a continued fever, has had frequent occasion to remark that there is more or less disposition in it to give way on certain days. As these indications of nature seem to exist, advantage should be taken of them, so as to lend the aid of medicine to effect the end she seems to have in view at each particular period.

**77. Symptoms.**—An attack of simple continued fever is generally ushered in with a considerable degree of langor, or sense of debility; sluggishness; aversion to motion; frequent yawning and stretching; the face and extremities become pale, and the skin over the whole body constricted; followed by a sensation of cold in the back, passing thence over the whole frame; and these continuing to increase, tremors in the limbs and cold shiverings succeed. With these symptoms there is loss of appetite, unpleasant taste in the mouth, slight pain in the back, head and loins, and a small, frequent respiration. The sense of cold and its effects, after a little time become less violent, and alternate with flushes of heat; and, at length, going off altogether, are succeeded by great heat, diffused over the whole body; the face is flushed, the skin is dry, as also the tongue, and universal redness prevails, with violent pain in the head, oppression at the chest, sickness at the stomach and an inclination to vomit up its contents; great thirst; costiveness; and a full, frequent pulse, beating from 100 to 120 strokes in a minute. In this, as in other fevers of the continued kind, there is generally an increase of

the febrile symptoms towards evening, and if there be much determination of blood to the head, incoherency or slight delirium will ensue.

78. After continuing, probably, for several days, with no great variation, these symptoms are gradually changed; the tongue, from being at first whitish, becomes streaked with yellow or brown fur, the pulse loses its strength, yet retains its hardness, and becomes quicker, the strength is considerably depressed, and the disease assumes a mild typhoid character.

79. If the disease be likely to prove fatal, either in consequence of its long continuance, or the severity of the symptoms, picking at the bed-clothes, startings of the tendons, involuntary discharges of urine and fæces, coldness of the extremities, and hiccough, come on, with a sinking or intermitting pulse. The favorable symptoms are, the pulse becoming soft, moderate, and approaching its natural state; the tongue losing its furred appearance and becoming clean; thirst abating; the skin covered with a gentle and equable moisture, and feeling soft to the touch: the secretory organs performing their several functions, and the urine depositing flaky crystals of a dirty red color, and becoming turbid on being allowed to stand.

80. *Treatment.*—The treatment of simple continued fever consists in, 1st, reducing the general force of the circulation; 2d, restoring the healthy actions of the various excretory organs, particularly the skin, liver, and kidneys; 3d, equalizing the circulation and obviating local determinations; and 4th, in the removal of every thing calculated to irritate the system or cause undue excitement.

81. The means for effecting these objects have already been treated of in part, in speaking of remittent fever, and will be more fully detailed under the head of "inflammatory continued fever." They are but varieties of the same disease, and are so often complicated, and require so precisely the same treatment, that it would be useless to repeat the means to be employed under two distinct heads. The necessary variations in

the exhibition of remedies, will always be dictated by the symptoms, and will be pointed out in the detail of treatment proper for the inflammatory grade.

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#### INFLAMMATORY CONTINUED FEVERS.—SYNOCHA.

82. This fever is characterized by the usual initial symptoms of fever, followed by considerable increase of heat, a frequent, strong and hard pulse, scanty and high colored urine; with great suffusion of the countenance, eyes and skin; there is great thirst, and the tongue is covered with a white fur; the bowels costive; and disturbed rest. The animal functions are not much disturbed until late in the disease, when there comes on a morbid sensibility and intolerance of usual impressions, the judgment is much impaired, with great restlessness and hurried or impeded respiration.

83. *Causes.*—Sudden transitions from heat to cold; exposure to a high temperature; violent exercise; drinking strong liquors; a full diet, with little exercise; the sudden application of cold to the body when warm; violent passions; sleeping on the damp ground; drinking cold liquids when the body is heated; repelled eruptions; suppressed evacuations; night-watchings; and every thing calculated to induce plethora.

84. Delirium, excessive restlessness, great oppression of the breast, with laborious respiration, startings of the tendons, hiccough, cold clammy sweats, and involuntary discharges of urine and fæces, are extremely unfavorable symptoms.

This disease usually goes through its course in about fourteen days, and terminates critically, either by gentle perspiration, diarrhœa, hemorrhage from the nose, or the deposite of a copious sediment in the urine, a crisis which is usually preceded by some variation in the pulse. It often, however, terminates fatally. As it is a disease always attended with danger, the best medical assistance ought to be procured as soon as possible. A physician may be of use at the beginning, but his skill is often of no avail afterwards.



85. *Regimen.*—The patient may use such drinks as rennet-whey, barley-water, balm-tea, apple-tea, or tamarind water. Orange whey is likewise a very grateful and refreshing beverage—it is made by boiling in milk and water a bitter orange sliced, until the curd separates. If no orange can be had, a lemon, a little cream of tartar, or a few spoonfuls of vinegar will answer very well. These drinks may be used at discretion. A variety has been mentioned, in order that the patient may have it in his power to choose those which are most agreeable, and that when tired of one, he may have recourse to another. In regard to the use of cold water, see the remarks on that subject when speaking of intermittent fever, paragraph 23.

86. The diet must be very spare and light. All kinds of meat, and even chicken-broths, are to be avoided. Corn or oat-meal gruel, panado, or stale light bread boiled in water, to which a little sugar and salt may be added to render it more palatable, will form the best diet.

87. It will greatly relieve the patient, especially in the hot season, to have fresh air frequently let into the chamber; and to have his linen and bed clothes changed as often as prudence and circumstances will permit. It is very common in fevers, to load the patient with bed-clothes, under the pretence of making him sweat, or of defending him from cold. This custom has many ill consequences. It increases the heat of the body, fatigues the patient, and retards, instead of promoting, perspiration.

88. Sprinkling the chamber with vinegar, lemon juice, or vinegar and rose-water with a little nitre dissolved in it, will greatly refresh the sick; and should be frequently repeated, especially in very warm weather. The patient's mouth should be very often washed with a mixture of water and honey, to which a little vinegar may be added, or with a decoction of figs in barley water. His feet and hands ought likewise to be frequently bathed in lukewarm water, particularly if the head be affected. He should be kept as quiet and easy as possible. Company, noise, and every thing that dis-



turbs the mind, is hurtful. Too much light, or any thing that affects the senses, ought to be avoided. His attendants should be as few as possible, and they ought not to be too often changed; and his inclinations ought rather to be soothed than contradicted.

89. *Treatment.*—In this, as well as all other fevers attended with a hard, full, quick pulse, bleeding is of the utmost importance. This operation ought to be performed as soon after the symptoms of inflammatory fever make their appearance as possible. One large bleeding, at this period of the disease, will have a much better effect than repeated small ones afterwards.—The quantity of blood to be taken away from a large orifice, however, must be in proportion to the strength of the patient and the violence of the disease. The object is, to subdue the disease; and the benefit to be derived, is not from the quantity of blood taken, but from the impression made by it; and that alone must govern us in regard to the amount to be abstracted at any one time. The pulse is the only sure indication of the degree of impression made. Frequent bleedings are of less value than one efficient one, in any case demanding the use of the lancet. They tend to weaken and prostrate the vital forces, without making much impression on the disease; or, if that does not take place to an alarming extent, the system becomes so habituated and educated to the loss of blood, that no effect whatever is produced—at least no beneficial one.

90. If, after the first bleeding, the fever should increase, and the pulse become more frequent and hard, there will be necessity for repeating it a second, and perhaps a third, and even a fourth time, as the symptoms may require. If the pulse continue soft, and the febrile excitement moderate after the first bloodletting, it ought not to be repeated. One bleeding in the mild form of continued fever is often sufficient; the abstraction of blood not being so imperiously demanded as in the inflammatory species; yet it must not be neglected, both on account of the great tendency to local inflammations which always exists in continued fever, and of

the efficacy of the lancet in relieving visceral congestion.

91. As before remarked, the pulse must be the principal guide in venesection; but we must also take into consideration the age, sex, mode of life, habits, and constitutional predisposition of the patient. Persons in warm climates, or those who are of a weak nervous, habit of body, will not bear it so well as the inhabitants of more northern regions, or those who are athletic, and of a sanguine temperament. The buffy coat which appears on the blood in inflammatory complaints, is generally made a guide for its further abstraction; but this test cannot be relied on with safety; for it often appears when there is no inflammation present, as in dysmenorrhœa, and rheumatism. The size of the orifice will also have much influence in producing the buffy appearance. More buff will appear on blood drawn from a small orifice in an affection not inflammatory, than on an equal quantity drawn from a large one in a disease of a highly inflammatory character.—“A hard, quick, tense and corded pulse, will always justify the use of the lancet, whatever the disease may be called, or at whatever stage it may occur.”

92. After venesection, an emetic should be exhibited, if circumstances will justify it, particularly if nausea prevail at the commencement of the disease. Twenty grains of ipecacuanha and two of emetic tartar may be given. Twenty years ago, emetics were always employed in the beginning of this disease; and although they afterwards fell into disuse and purging was relied on, principally because it is less offensive, the most judicious and successful practitioners have, of late years, again resorted to them, and bear the most unequivocal testimony in favor of their great usefulness and superiority. They rarely fail to quiet headache, relieve gastric uneasiness, and bring the disease to a speedy solution. Emetics, however, are inadmissible in cases of florid countenance, where there is a predisposition to apoplexy, in pregnancy, or in rupture.

93. Purgatives are necessary throughout the whole

course of the disease, both for the removal of irritating matters from the intestines, and for exciting the biliary organs to secretion. The kinds of purgatives best suited to effect these objects, have already been pointed out under the head of intermittents [see paragraphs 31, 32.] A combination of purgatives is best, as it increases their activity and mitigates their violence; and "Cooke's pills," "Lee's antibilious pills," and "Anderson's pills," may be recommended as among the best combinations. The discharges are often quite black and tar-like; and this appearance may be always hailed as a favorable omen, provided care be taken to keep them up until the liver is completely emulged of vitiated bile, and the bowels cleared of it. This black matter is much disposed to adhere to the inner coat of the intestines, and its removal is productive of singular advantage and relief to the patient. Calomel, in doses proportioned to the emergency of the case, and the pills named above, are the best remedies to effect this purpose. These remedies must be continued until the object is attained—after that, some of the milder laxatives may be substituted in their stead. Where there is much inflammation of the alimentary canal, small doses of calomel and ipecacuanha are to be preferred. [See *Dysentery*.] Purgatives should not be used during the exacerbation, as they always act more promptly and efficaciously during the remission—nor should they be discontinued until convalescence is complete, for constipation of the bowels would almost certainly bring on a relapse.

94. If the heat and fever be very great, forty or fifty drops of the dulcified spirit of nitre may be made into a draught, with an ounce of rose water, two ounces of common water, and half an ounce of simple syrup or of loaf sugar. This draught may be given to the patient every three or four hours while the fever is violent; afterwards, once in five or six hours will be sufficient, using in the mean time some diluent drink.

95. If there be great heat of the body, with pain in the head, and delirium, and the general abstraction of blood, by opening a vein in the arm, is not deemed advisable, the temporal artery may be opened, and the



blood allowed to flow until the head is relieved. Cups may also be applied to the temples, and cold applications to the head. When other means will not answer, the head may be shaved, and a blister applied to the back of the neck.

96. If about the tenth, eleventh, or twelfth day, the pulse becomes softer, the tongue more moist, and the urine begins to let fall a reddish sediment, there is reason to expect a favorable issue to the disease. But if, instead of these symptoms, the patient's spirit's grow languid, his pulse sinks, and his breathing becomes difficult, with stupor, tremulousness, and startings of the tendons, there is reason to fear that the consequence may be fatal. In this case mustard cataplasms may be applied to the soles of the feet, the ankles, and wrists. They are best made by mixing the mustard with starch and water, without vinegar. The patient must be supported by small quantities of wine-whey, negus, sago-gruel with wine in it, and similar articles. Hoffman's anodyne tincture, tincture of hops, and the camphorated emulsion may be also advantageously given. I have seen the best effects result from the exhibition of ammonia in such cases, in doses of from two to five grains every two hours. The following is also an excellent remedy:

Take	Camphor mixture, six ounces.
	Sulphuric ether, three drachms.
	Aromatic spirits of ammonia, three drachms.

Mix--and give the patient a tablespoonful every half hour or hour.

97. Diaphoretics require to be used, in continued fevers, with a clear and discriminating judgment. They are often mischievous; and, consequently, are more seldom used than formerly. They are never of service until all inflammatory symptoms are subdued, and evacuations are established. It may be stated as a general fact, well worthy of remembrance, that to *force a sweat* is almost always hurtful, and never beneficial to the patient. Where this class of remedies is indicated, nitre and antimony, or the spirit of Mindererus, may be



exhibited as directed in remitting fever (66.) A solution of emetic tartar in water, given in such doses as will not disturb the stomach, is an admirable remedy. It interrupts the chain of morbid association on which the fever depends, and speedily brings it to a crisis. The following mixture may often be exhibited with advantage:

Take    Strong vinegar, seven ounces.  
         Carbonate of potash, one drachm.  
         Loaf sugar, two drachms.  
         Water, six ounces.

Mix—and give a tablespoonful every hour.

This will reduce the fever, and quiet the stomach when irritable. Its diaphoretic properties may be increased by the addition of sweet spirits of nitre or antimonial wine.

The use of refrigerants, as they are termed, is occasionally beneficial. Nitre is the article most usually employed; and may be given according to the following formula:

Take    Nitre, one drachm.  
         Tartar emetic, one grain.  
         Calomel, twelve grains.

Mix—divide it into eight powders, and give one every two or three hours,

These powders rarely produce diaphoresis, but are very effectual in reducing arterial action; and, from their tendency to purge, are peculiarly valuable in cases where constipation and a hot surface are united. Cold water applied to the surface is also a very certain and effectual means of allaying febrile excitement. It may be applied by dashing it on the body or by sponging—the last method is preferable, as being the most agreeable and the safest, and quite as efficient. Its use is called for by an active pulse and high temperature of the skin. Where the pulse is full and the skin not hot, it is a perilous remedy. In cases complicated with local inflammation, also, cold ablutions will rarely do good, and sometimes manifest harm. Cold water, or

cool acidulated drinks, should be freely taken so long as the skin remains dry. When the surface is moist with perspiration the drinks should be tepid.

98. It requires little argument to prove, that the body, as well as the mind, must require indulgence after the severity of such a disease. Those who follow laborious employments ought not to return too soon to their business after a fever, but should remain as quiet and free from exertion as possible, until their strength is recruited; nor should those engaged in mental pursuits attempt to pursue study, or engage in any avocation that requires intense thinking.

99. The most rigid attention to regimen is not only necessary during the fever, but also during convalescence. By neglecting this, many relapses occur, or the patients fall into other diseases, and continue valetudinarian for life. It is a common remark among the observant, that infinitely more persons die from errors in diet, and other imprudencies, after convalescence is begun, than from disease itself. The appetite is usually voracious upon recovering from most fevers, and to say that its cravings are not to be satisfied, is certainly an unpalatable doctrine; yet the safety of the patient lies in its strict administration.

100. Fresh air, exercise of a gentle kind, on horseback or in a carriage, and agreeable society, will greatly contribute to the recovery of convalescents.

101. "Tonics and stimulants are very rarely necessary during convalescence from inflammatory or common continued fever. They would indeed very generally prove prejudicial. For several days after the complete subsidence of the fever, the patient ought to refrain from solid animal food, and above all from high-seasoned articles of diet, Farinaceous liquids, and weak animal broths, taken in moderation, will in general be quite sufficient for the first four or five days of convalescence."

102. It may also be well to remark, that in this, as in most other fevers, sleep is much interrupted, and from a want of it delirium often ensues. For this opium is often exhibited; but is a very uncertain and dangerous

remedy in such cases, for should it fail to procure rest, the delirium would be much increased by it.

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## NERVOUS FEVER.

The fevers already described, and indeed, all diseases attended with a considerable degree of morbid heat, affect in some measure the nervous system; but in this particular species, the nervous system is more immediately and more violently affected, than in any other.—When a fever is once produced, from whatever cause, it seldom fails, by long continuance, to occasion all the symptoms which appear in the nervous or malignant fever.

This fever has been described by different authors under various names; the *typhus* or *nervous* fever, the *slow* fever, the *jail* fever, the *hospital* fever, the *ship* fever, the *petechial* fever, the *putrid* fever, and the *malignant* fever.

The first appellation it receives from its attacking the brain, and from the effects it produces on the nervous system. The second, from the slow and gradual manner in which it sometimes comes on. The third, fourth, and fifth, from their being apt to arise in jails, hospitals, and ships, when numbers of men are crowded together, and when sufficient care is not taken to have such places well ventilated and cleansed. The sixth, from certain spots which sometimes appear on the skin of the patients laboring under this disease. The seventh, from the putrid state, or tendency *supposed to take place in the fluids*; and the last from the dangerous nature and malignity of the fever; but are all one and the same disease, variously modified, according to the violence of the symptoms, and different constitutions of the patients.

*Symptoms.*—The symptoms are commonly more various in this, than in any other fever. It sometimes creeps on in such a slow, insidious manner, that the patient will have suffered the disease to make considerable progress, before he thinks it necessary to use



any remedies. On other occasions it comes on with a great degree of rapidity, and with many of the symptoms common to all fevers.

Thus, it commences with alternate sensations of heat and cold, a want of appetite, a nausea, and occasional vomiting. These are followed by some confusion of the head, a sense of weakness, dejection of spirits, tremor of the hands, and frequent sighing, without knowing the cause. At this stage the pulse is irregular, sometimes a little quicker; at other times, about the natural standard. In some, a dull and heavy pain, with a sense of coldness, possesses the back part of the head; in others, a pain in the orbit of one eye.

These symptoms gradually increasing, the pulse becomes smaller, and at the same time quicker, while the arteries of the temples and neck beat with additional force. The patient is generally more restless towards night, the breathing is somewhat difficult, and very little refreshment is obtained, from his short and disturbed slumbers. This gradual increase of symptoms, with the peculiar, pale, sunk countenance attending fever, will give the alarm, even when other nervous diseases with which the earlier symptoms have been confounded are present.

In the progress of the disease, the system is unequally affected; for sometimes headache, restlessness, and uneasiness, prevail in a high degree, while at the same time the tongue is clean and moist; and at other times, while there is no headache, or restlessness, the tongue will be dry and foul, and profuse sweats will break out. This fever, moreover, is not only thus irregular, in affecting various parts of the body differently, but it is also irregular in its exacerbations; and these, instead of taking place in the evening, will arise often in the morning. Again, sometimes the fever is very violent for the first three or four days; it then diminishes for a time, and then perhaps increases again. After, or about the tenth day, the weakness increases considerably; the whole nervous system becomes affected with tremors and twichings; the urine is commonly pale; the fingers are in constant motion; the tongue becomes dry,



of a dark color, and trembles when attempted to be put out; and some times the gums and lips are covered with a dark viscid substance. To these succeed stupor, cold clammy sweats, with a fetid smell, hiccough, and twitching of the tendons, together with an involuntary discharge of the excrements.

In every malignant case, this fever tends fatally on or before the seventh day: but more frequently those who die, are carried off about the middle or towards the end of the second week. When the patient survives the twentieth day he usually recovers. When the fever terminates favorably before, or at the end of the second week, the crisis is generally obvious; but when that happens at a late period, particularly if after the third week, the favorable turn is less evident; and sometimes several days pass, during which the disease goes off so gradually, that the most experienced are in doubts whether it abates or not. At length, however, it becomes evident by a warm moisture on the skin, by the dark-colored gluey substance which adheres to the gums and lips, growing less tenacious, and being more easily removed; by the stools regaining a natural color; by the urine being made in greater quantity, and depositing a sediment: by a return of appetite, and by the pulse becoming slower than it was at the commencement of the disease. Deafness ensuing, tumors appearing behind the ears, a red rash, and an inflamed scab below the nose, or about the lips, are also considered favorable. The symptoms which point out the near approach of death, are a change of voice, a wild stare, a constant inclination to uncover the breast, purple or livid spots on the skin, laborious respiration, profuse evacuations by sweating or purging, much watchfulness, sinking of the pulse, great incoherency of ideas, muttering, picking at the bed-clothes, considerable dilatation of the pupil of the eyes, involuntary discharges by urine and stool, starting of the tendons, hiccoughs, and convulsions. If many of these symptoms occur, little expectation of recovery can be entertained.

*Causes.*—This fever is occasioned by impure air, putrid animal and vegetable effluvia, innutritious diet, and by living on damaged provisions. We are, therefore, not surprised to find it often originate in jails, ships, and dirty dwellings, where numbers are crowded together, and where it is impossible to have sufficient ventilation.

Though human contagion, and the effluvia arising from putrid animal and vegetable substances, are the most frequent and active cause of this disease, yet they cannot be considered as the only ones; for we sometimes meet with instances in a country neighborhood, of persons being seized with the disease in all its malignity, where it is not epidemic; nor can it be traced to any place where the human effluvia could be supposed to be confined in any uncommon degree.

Hence nastiness, a moist atmosphere, much fatigue, cold, depressing passions, scanty diet, excessive study, too free use of mercury, immoderate venery, profuse hemorrhage, or whatever weakens the nervous system, may be enumerated among the causes.

*Treatment.*—With regard to the cure, when the inflammatory symptoms appear to run very high, the early use of the lancet will be required. It should be observed, however, if blood-letting be employed in all the various forms of typhus, without due regard to the period of the disease, the quantity of the blood drawn, the age, habit, and constitution of the patient, it will often be followed by fatal consequences. On the contrary, if it be cautiously used in the beginning of the inflammatory typhus, it will be of the greatest utility, as it will render the other means more prompt and effectual, and thereby facilitate the cure.

When the lancet is resorted to, the blood should be taken away in small quantity, and from a small orifice. And as the rising of the pulse, under bleeding, is a certain indication of its propriety, so its sinking is as certain an indication of its impropriety; hence we have a criterion to guide us in the operation. Towards

the close of most acute fevers of severity, there is some tendency to a change in the constitution of the fluids; and this may occur as soon as the second or third day, in the most malignant cases of typhus. The blood, when drawn in this state, loses its florid color, and as it flows from the arm, exhibits a dirty, dark appearance, some times of a muddy blue, and, and some times of a deep black. It does not coagulate, but continues in a dissolved state in the vessel, which induced the ancients to call it putrid. It is unquestionably very unfavorable, and indicates that depletion is improper.

In the early period of the simple typhus giving an emetic, followed the next day by some active purgative medicine, have frequently cut short the fever at once; and when this desirable effect has been produced, they have hardly ever failed to shorten its duration, and lessen its danger.

Although medicines, which might excite profuse sweating, would be highly improper in this fever, yet those possessed of a mild, diaphoretic power, as Dover's powders, the camphorated powders or mixture, (*see Dispensatory*), the spirits of nitre, or infusion of Virginia snakeroot, may be occasionally employed with advantage.

The saline mixture given in a state of effervescence, every two hours, readily abates thirst, and removes the increased irritability of the system. In like manner, a table-spoonful of yeast, given every three or four hours, affords much relief, and has, alone, often proved an effectual remedy.

The Rev. Edward Cartwright, having read of the power of fixed air in preserving meat from putrifying, was induced to make trial of yeast on a boy of fourteen years of age, who had been ill several days of a putrid fever, for which bark and wine had been exhibited without any apparent advantage, and where there was but little hope of recovery. He directed two table-spoonfuls of yeast to be taken every three hours, which having been complied with, the boy found almost immediate relief, and recovered very quickly. Mr. Cartwright



reports, that he gave the same remedy to above fifty patients in this fever, without losing one.

Whatever may be the mode of action of yeast in typhus, the fact appears to be indisputable, that fixed air takes off that extreme debility of the stomach so conspicuously marked in disorders of this nature; and in proportion as that subsides, the pulse rises, becomes slower and fuller, the burning heat on the skin disappears, and a truce is gained for the reception of nourishing supplies. The most agreeable mode of administering yeast, is to add two table-spoonfuls of it to a quart of beer or mild porter, of which a wine glassful may be taken every hour or two.

According to the practice of Drs. Thomas, Currie, and Jackson, as well as other eminent practitioners, the affusion of cold water is one of the most powerful and efficacious means which we can make use of in typhus fever. Its effects will be more salutary, in proportion as it is early adopted; that is, during the first stage of the disease. Such being an indisputable fact, established upon the firmest basis, we ought always to employ it, very soon after we have evacuated the contents of the alimentary canal. In the early stage of the disease, cold water may be poured in considerable quantity from a height, or dashed forcibly from a pail on the patient. But aspersion or ablution of the body, by means of a sponge, will be more eligible and safe in the advanced periods. The effects produced by both modes are grateful and refreshing to the patient, and they usually bring about an abatement of fever, followed by more or less of a diaphoresis, and this again by a refreshing sleep.

Dr. Currie states that the cold affusion may be used at any time of the day when there is no sense of chilliness present; when the heat is steadily above what is natural; and when there is no general or profuse perspiration. During the cold stage of the paroxysm of fever, while there is any considerable sense of chilliness present, or where the body is under profuse perspiration, this remedy ought never to be employed, as by so doing



we might extinguish life. In the advanced stage of fever, when the heat is reduced, and the debility great, some cordial, such as wine warmed with an addition of spice, or even brandy, should be given immediately after it.

When recourse is had to this remedy, every arrangement should be made for the affusion before the patient is moved at all, and fatigue, as well as disgust should be avoided as much as possible. In those cases where the delicacy of the system, or the apprehensions of the patient or of the by-standers, may prevent cold affusion from being employed, we may substitute tepid affusion for the more powerful remedy, or we may recommend either ablution or aspersion. The tepid affusion, the water being luke warm, or from 87 to 97 degrees of Fahrenheit, produces a cooling effect equal to that of cold affusion; partly in consequence of more speedy evaporation, and partly because so great a glow or reaction does not succeed. The important object of diminishing heat, therefore, may be obtained with great certainty by the repeated employment of the tepid affusion, suffering the surface of the body to be exposed in the interval to the external air. A diminished frequency of the pulse, and respiration, and a tendency to repose and sleep immediately ensue, though its effects are not so permanent as those of the cold affusion.

Dr. Currie reports, that a putrid fever having made its appearance in a regiment quartered in Liverpool, he had the men drawn up and examined, seventeen of whom were found with symptoms of it upon them—these he subjected to the cold affusion once, and sometimes twice a day. In fifteen of this number, the contagion was extinguished, and in the remaining two the fever went through its course. The healthy part of the regiment bathed in the sea daily, and by these means he effectually destroyed the contagion. He farther relates, that of thirty-two who went through the disease, by its being too confirmed to be removed at the time of first seeing them, only two died; and with these recourse was not had to the cold affusion.

The same remedy has likewise been successfully

employed by Dr. Currie, and many others in the more advanced stage of the fever, so as seldom to fail of procuring a safe termination. He relates the case of a soldier who was in the ninth day of the disease when he first saw him; his pulse was 100, and feeble, his heat was 104, his thirst very great, his tongue foul and black, his mind much confused, and at times he was delirious, and petechiæ were dispersed over his whole body. The mode of treatment was as follows: his strength was directed to be supported by administering a bottle of wine a day, with an equal quantity of gruel; every night he took an opiate draught, and his body was kept open by laxative clysters, and when these failed, by a few grains of calomel. A bucket full of salt water was directed to be thrown over him immediately, which was to be repeated according to circumstances.

The effect was, that in a few minutes after the affusion, the heat lessened to 98, the pulse moderated to 96, and his mind became more calm and collected. Two hours afterwards he had relapsed into his former state, but the night was passed with greater tranquility.—The whole of this practice was continued with nearly the same result, until the twelfth day of the disease, the affusion having been performed in the evening, and occasionally at noon. The fever continued its usual period; but on the twelfth day, the heat having sunk to its natural standard, the cold affusion was thenceforth omitted, and instead of it the body was sponged all over once or twice a day with vinegar.

A memorable instance of the good effects of cold affusion came under my immediate knowledge some years ago, says Dr. Thomas, whilst I practised in the West Indies. A professional gentleman of my acquaintance, residing in the Island of Nevis, was attacked with this fever; and it proceeded with such violence, that in a few days petechiæ appeared on different parts of his body, and a hemorrhage of blood issued from his nostrils, mouth, and other places. Under these unfavorable circumstances, he was freely exposed to the open air, and one or two buckets of cold

water were thrown over him ; he was then wiped perfectly dry, and replaced in his bed ; which plan of proceeding was repeated twice and sometimes thrice a day. By means of this application, the administration of an opiate at night, and a liberal allowance of wine, his life was preserved to the great, but pleasing astonishment of all his friends.

The affusion of cold water on the surface of the body, is considered, by Dr. Jackson, as a power which makes a strong and general impression on the system, and which arrests the disease, or changes its condition in virtue of that impression ; but not by subtracting increased heat, as supposed by Dr. Currie. Indeed, the good effects of the remedy in question, cannot, we think, be wholly owing to the mere subtraction of heat ; for it has been used with great advantage in many cases of fever, where there has been no perceptible increase of temperature, and where by affusion, ablution, or aspersion with cold water, the disease has been cut short abruptly, as well as in those where it had risen to a high point. Therefore, we may safely infer, that cold affusion, or the suddenly pouring cold water over the whole surface of the body, operates as a powerful stimulant, although its effects probably are of short duration, unless frequently repeated ; they are produced by the suddenness of the application affecting the nervous energy, and by the shock rousing the dormant susceptibility, so as to induce a new action, as it were, of the nervous system, removing spasmodic contraction of the extreme vessels on the surface, carrying off a large portion of morbid heat by general evaporation, and the remainder by insensible perspiration ; thence restoring the healthy action of the exhalents and capillaries.

As the danger of this fever is in proportion to the debility, the great point is to support the patient's strength and spirits by a liberal use of tonics and cordials, which should be early employed. At the same time, a nourishing diet should be used, suitable to the taste of the patient, and the most rigid attention paid to cleanliness and to a free circulation of pure air. In having recourse to these means, with a view of supporting the



vital energy, we must take care to prevent the feculent matter from being confined, by occasionally administering laxatives or clysters.

The sulphate of quinine excels all other tonics in this variety of fever. It should be given in the usual doses, either in pills or solution, (*see Dispensatory*), and repeated as often as the urgency of the case requires. Should the quinine not be at hand, the Peruvian bark may be given as freely as the stomach will bear, either in substance, decoction, or infusion. The beneficial effects of the bark, may be increased by conjoining it with the snake-root, in proportion of one ounce of the former to two drachms of the latter, or by adding to each ounce of the bark, a scruple of camphor. Where the quinine is used the snake-root may be given in infusion. (*See Dispensatory, under the head of Diaphoretics.*) When the bark is rejected in its various forms, as it frequently is, we should not despair of finding a succedanium as long as our country abounds with the red and black oak. From my own observations in practice, frequent bathing in a strong decoction of the bark of either will produce the same salutary effects, as could possibly be expected from a free exhibition of the Peruvian bark internally. (*See Materia Medica—and also Bilious Fever.*)

The other tonics of most efficacy in typhus are the mineral acids. I have myself employed the nitric acid diluted, (*see Dispensatory*), in doses of a wine glassful every two or three hours, with very beneficial effects. Dr. Thomas speaks highly of the muriatic acid in all febrile diseases of a malignant nature. In all such cases, he says, it will be found a powerful and efficacious medicine. His usual plan of administering it is nearly as follows: Having relieved the stomach by a gentle emetic, when nausea prevails, cleared the bowels of their feculent contents by a moderate dose of calomel and jalap or rhubarb, and subjected the patient to cold affusion when the circumstances already noticed have admitted of it, he gave to adults ten or twelve drops of the muriatic acid, guarded with five drops of laudanum, in an infusion of Columbo, Virginia snake-



root, or bark, and repeated the dose every four hours, gradually increasing the quantity to eighteen or twenty drops, or more. He says, from using it in this manner, his practice has been attended with the most decided success. Dr. Thatcher, also, bears testimony in favor of this remedy. He states a case of putrid fever, attended with extreme danger, in which he administered the muriatic acid in a strong decoction of thoroughwort, with a few drops of laudanum. When it had been taken freely for about twelve hours, a profuse sweat ensued, of a yellowish color, and nauseous smell; a favorable change immediately appeared, and the recovery was rapid.

Dr. Armstrong states, that he has employed the muriatic acid in typhus, with beneficial effects, when it did not excite griping pains or diarrhœa. He has prescribed as much as two drachms of it, largely diluted with water, in twenty-four hours, so as to make it a sort of common drink.

Another tonic of considerable efficacy in fevers of a malignant nature, is the solution of arsenic. Dr. Ferrier found, in the last stage of typhus, when neither bark, wine, or brandy, cold bathing, or even occasional doses of Cayenne pepper, had the effect of rousing the powers of life, or lessening the thick crust which covered the tongue, that most singular advantages were obtained by giving the arsenical solutions. As soon as the febrile paroxysms are stopped, he considers it best to suspend the use of the arsenical solutions, and to support the patient with bark and different cordials. Dr. Thomas corroborates the efficacy of this medicine, in stating a severe case of typhus which fell under his care; the patient having suffered two relapses of the fever, and her life despaired of, when he was induced to make use of this mineral solution. Its effects exceeded his expectations, for the woman's life was apparently preserved by it. The solution of arsenic may be given in its usual doses every three or four hours.

Of every other medicine, cordials only would supersede the bark; and with these putrid fever is sometimes successfully conducted, when the bark is disagreeable

or rejected. The chief is *wine*, which it is often necessary to give in large quantities. It must be recollected, however, that wine is an indirect stimulant, followed by a narcotic effect; so that when we begin, we must continue its use until nature can exert herself. In this case, and in all instances of putrefaction, whether general or local, our remedies are intended to supply the powers of nature. When these are aroused, our exertions may be safely remitted; and we find that this effect is produced in general fever, when the pulse becomes fuller and softer, the eye more quick, the skin more clear, and the tongue more clean and moist; in partial gangrenes by a beginning suppuration of the mortified part.

It is impossible to fix the precise quantity of wine that ought to be given, as it must be varied according to the nature of the existing symptoms, the age, constitution, and previous habits of the patient. Madeira is unquestionably preferable to every other wine, but, unfortunately, it is seldom to be procured genuine from the retail stores; consequently, it is better to obtain Sicily, dry Sherry, Lisbon, or Teneriffe wine. These should not only be given at first diluted, but in small portions at a time. A mixture of wine and milk, in proportion of one part of the former to three or four of the latter, constitutes an excellent drink, as well as diet, in the advanced stage of typhus. When the stronger wines excite too much, the weaker, such as claret, may be tried; and if these should not answer, small repeated draughts of brisk ale or porter, may be given, and in many cases with more salutary effects than wine; either being calculated, in the last stage of typhus, to give that degree of vigor to the system, requisite to remove those partial congestions which often exist at the period in combination with general debility. Good cider is another substitute for wine; and brandy, rum, or whiskey, may, though with less decided success, supply the place of either.

Although stimulants are indispensably necessary, where there is a loss of tone in the vascular system, and real debility existing, yet to employ them inconsiderately, will often be attended with bad consequences.

Dr. Armstrong observes, that it would be quite as rational to give a half intoxicated man a tolerable free allowance of ardent spirits, with a view to make him sober again, as to attempt to restore, while the stage of excitement continues, a typhus patient, by the administration of wine; for he may be said to be, in some degree, intoxicated by the stimulus of the fever, and he will therefore, be more affected by every glass of cordial that is administered. Dr. Potter, also, judiciously remarks, that the prescribing of diffusible stimuli in every fever that has the name of typhus attached to it, is one of the greatest absurdities and strongest infatuations that infest the practice of physic. There is no fever that will bear, much less require, such agents to remove it in its first stage.

It should be remembered, that when strong stimulants are incautiously administered, they have a powerful tendency to produce inflammation or congestion in the visceral organs, and thus to render the chance of recovery, at the best, very doubtful. Therefore, it is important in administering wine, or any other stimulant, to give it at first sparingly, and notice its effects carefully. If on trial the patient sleep well, breathe easily, and feel a universal glow, we may safely go on with it; but if, on the contrary, it produces restlessness, difficulty of breathing, the tongue becoming dryer, and the pulse more tense and rapid, its farther use should be omitted until the inflammatory diathesis be removed. In habitual drunkards, the stage of collapse sometimes rapidly supervenes, and they should always have an earlier and more liberal allowance of stimulus, than those who have lived in an abstemious manner, otherwise they will sink under the evacuations which may be indispensably necessary to remove the disordered condition of certain organs.

By this general rule, a cure will, for the most part, be effected; but in the progress of the disease, particular morbid symptoms will require special treatment. Thus, affections of the head, with stupor and delirium, will sometimes be relieved by frequently washing the temples with cold vinegar and water; and occasionally



bathing the feet in warm water. But if these affections, notwithstanding, should continue, it will be necessary to shave the whole of the head, and apply cloths wrung out of cold vinegar and water, which should be frequently renewed; and if the delirium be accompanied with wildness of the eyes, a blister must be applied to the head.

Where there prevails any unusual coldness in the lower extremities, recourse must immediately be had to the warm bath, or to some warm stimulating applications externally, as well as the exhibition of stimulants internally, in order to restore the circulation to the surface. The efficacy of the bath will be greatly increased, in such cases, by having it strongly impregnated with salt, and the patient should remain in it till his skin become warm; and on being removed to his bed, he should be well rubbed all over with hot flannels, and bottles of hot water, or heated bricks with vinegar poured upon them enveloped in flannel applied to his feet, legs, and under the armpits. When a bathing vessel cannot be procured, use, as an embrocation, a strong solution of table salt, and heated spirits, which admirably recalls the languishing circulation to the surface.

A depression of the animal heat will sometimes come on in the collapse of typhus without any apparent cause. The pulse becomes very small, and the extremities very cold; and if some warm cordial, as mulled wine, hot toddy, or ginger tea, sweetened, with the addition of a little spirits, be not immediately administered internally, and warm stimulating applications applied externally, death will soon follow. Blisters, as well as sinapisms in such cases, have frequently been employed, and are serviceable by their stimulating effects; but they should not be continued on long at a time; and when a blister is raised in this disease, the sore should be frequently washed with an infusion of red oak bark; and nothing ought to be applied to the part which may tend to increase the discharge; for that, by debilitating the system, would prove injurious.

If nausea or vomiting continue, apply flannels, wrung out of hot spirits, in which red pepper or mustard seed



has been steeped, to the stomach and lower extremities. These failing, give the saline or camphorated mixture, and apply a poultice of mint leaves or cloths moistened with laudanum and camphorated spirits, to the stomach, and cataplasms of mustard seed and vinegar to the feet.

A slight purging, attended with a gentle moisture of the skin, not unfrequently arises towards the close of this fever, and now and then assists in carrying it off; but where it does not seem to produce a critical effect, it ought to be stopped as speedily as possible by giving charcoal or the absorbing mixture, with a few drops of laudanum, or by clysters of starch, or the decoction of red oak bark, containing in each a teaspoonful of laudanum. When the purging is not considerable, wine or brandy, mulled up with spice, or a free use of arrow root, with plenty of nutmeg, or rice milk with cinnamon boiled in it, is often sufficient.

If purging be produced from swallowing putrid matter, give a small dose of castor oil or rhubarb and magnesia, and afterwards charcoal. (*See Bilious Fever.*) In the stage of excitement, a diarrhœa accompanied with bloody stools sometimes occurs, indicative of either a preternatural fullness of the liver, or inflammation of the mucous membrane of the bowels. In this case we must resort to the warm bath, mucilaginous drinks, and evacuants, as castor oil, &c.

It not unfrequently occurs, that patients, kept in very close apartments, have, on the approach of the last stage, black, bloody stools, without any offensive odor. About the same time petechial or purple spots begin to show themselves upon the extremities, which at first are only few in number, and appear as if drops of black ink had been allowed to dry here and there upon the skin; but becoming numerous, they soon spread over different parts of the body, and are generally accompanied by discharges of blood from the nostrils, mouth, bladder, or bowels. When these symptoms are accompanied with a weak, quick, thready pulse, we may be sure the stage of collapse is at hand. In such cases, recourse must be had to the most powerful antiseptics, such as vegetable and mineral acids, yeast, liquors in a

state of fermentation, quinine, wine and bark, and aromatics with very small doses of laudanum. At this momentous crisis, bathing the patient frequently in spirits, or in a bath composed of equal parts of whiskey and decoction of red oak bark, with a free admission of air, will not fail to produce good effects. In addition to this mode of treatment, when the hemorrhage proceeds from the nose, mouth, or ears, it is advisable to make use of local applications, as lint dipped in a solution of alum, or blue vitriol, or some powerful styptic.

Miliary eruptions sometimes appear as the crisis to this fever, and ought, therefore, on no account to be checked by any kind of evacuations; nor should the patient, on the contrary, be kept too warm with a view of forcing them out.

Profuse sweats are to be obviated by sponging the body and extremities daily with equal parts of vinegar and spirits; by being lightly covered with bed clothes; and admitting fresh air freely into the chamber, and by giving whatever he drinks, cool, and agreeably acidulated with lemon juice or elixir vitriol.

If hiccoughs or starting of the tendons supervene, it will be necessary to give camphor and volatile sal-ammoniac in large doses, with the warmest cordials. or tinct. castor, and laudanum, half a drachm of each every three or four hours, unless relief is obtained.

In cases of retention of urine, the treatment must be varied according to circumstances. In some instances the kidneys become inflamed, and in this state very little urine is secreted, until the healthy action of the vessels be restored by administering calomel and mild purgatives, swallowing freely of demulcent drinks, and, occasionally, using the warm bath. In the low typhus, the kidneys are rendered incapable of performing their functions from a loss of tone, and in such cases stimulants and tonics, with cold applications over the region of the bladder, as cloths wrung out of spirits, or equal parts of vinegar and spirits, are the best remedies.—When the bladder is over distended, or inflamed, indicated by acute pain and some tumor, the catheter is indispensably necessary to draw off the water. In febrile

complaints, it will be found that, where a small quantity of urine is secreted, the sediment is proportionably copious; and, on the contrary, where a large quantity is secreted, the sediment is proportionably scanty. If attention be paid to keeping the bowels open from the commencement of fever, a suppression of urine will hardly ever take place.

In an advanced stage of the disease, it sometimes happens, that in addition to a profound secretion of viscid saliva, white ulcers, or aphthæ, appear in the mouth. In such cases the detergent gargle, (*see Dispensatory*,) should be frequently employed, and the mouth occasionally washed with a solution of alum in water, an ounce of the former to a pint of the latter, and this will quickly take away the stench that arises from them. The viscid phlegm, which collects about the tongue and teeth, may be wiped away with flannel, dipped in vinegar, or salt and water, or after washing the mouth with sharp vinegar or some austere acid, it may be scraped off with a knife, or a piece of bent whalebone.

For want of sleep, much rambling and low delirium sometimes occur, which will require an opiate at early bed-time. The most advisable way of giving it, to prevent any deleterious effects, is to conjoin laudanum, with the camphorated mixture, or the opium with a few grains of camphor, volatile sal-ammoniac, or some mild diaphoretic, as Dover's powder. Opiates are more admissible in this fever than in any other, and, as it is of the utmost consequence to procure rest, they should, with this view, be employed every evening, where there is no great delirium. In all fevers where we wish to procure sleep, and cannot have recourse to opium, on account of the delirium being present, a pillow of hops laid under the patient's head, has been used with singular advantage.

In case of watchfulness, the camphorated jalap, or porter and water, will generally succeed. When, however, these means fail, and there is great prostration of strength, followed by stupor, and a train of the most distressing symptoms, wine should be exhibited in large

quantities, and it will be found that the patient will show a relish for this valuable cordial, after refusing medicines and every kind of nourishment in a solid form.— At first it is better relished mulled; but afterwards the patient will take it freely in its pure state, and in the quantity of one or two quarts a day, without intoxication. The quantity of wine should be regulated by the degree of debility present, the age of the patient, and the effects produced by it.

The proper rule to be observed in the use of wine, is to give it until the pulse fills, the delirium abates, and a greater degree of warmth returns to the extremities. And upon the smallest appearance of the stupor returning, the pulse quickening, and sinking, for they usually go together, the wine must be resumed, and continued in that quantity which is found sufficient to keep up the pulse, and ward off the other bad symptoms.

When wine cannot be had, rum and brandy diluted with milk or water sweetened, will answer; and with some patients is better relished. The friends of the sick should never be disheartened too soon, for here, if any where, we may say, “while there is life, there is hope.” And I can truly aver, that I have often seen the patient raised, as it were, from the dead, by the determined use of generous wine alone, especially old Maderia.

As soon as the patient is able to take refreshment, such as panado, arrow-root, &c., the quantity of wine must be gradually diminished. For although it be absolutely necessary to take it so liberally, during the continuance of this fever; yet, as soon as that shall have left the patient; since the third part of what formerly had proved a salutary cordial and restorative, would in this state of convalescence, occasion a dangerous intoxication.

It sometimes happens, at the close of typhus, that the patient is affected with a slight degree of mania or temporary alienation of the mind. In such a case it will be necessary to support the patient with a generous, nutritive diet; to keep him as quiet as possible; and to



give him tonic medicines, as bark and elixir vitriol, nitric acid or tincture, or rust of steel, carefully avoiding evacuations.

If the appetite does not readily return on the cessation of the fever, the mineral acids, or stomach bitters, will be proper. Bathing daily in a strong decoction of red or black oak bark, will be found an excellent remedy in removing the irritability and weakness which are left behind; and when there is no visceral obstruction, the shower bath will be attended with beneficial effect.

We repeat, it is of the utmost importance throughout the whole course of the disease, that the most rigid attention be paid to cleanliness, and the communication with the external air kept up in different degrees day and night, according to the state of the atmosphere.—None but those whose business it is to attend the sick, ought to be allowed to go near the patient, except when there is little or no affection of the head. In such cases the presence of a friend may sooth the mind and help to dispel gloomy ideas; by diverting his thoughts from that anxiety and dread of danger which invariably attends his complaint.

*Regimen.*—In addition to the mild articles of diet enumerated in the bilious fever, bread and milk, with a little water, sugar, and the pulp of a roasted apple, form a most grateful and nutritious food; and, for the sake of variety, cider, porter, or any other drink which the patient covets, should always be allowed.

It has been observed, that this fever often originates from corrupted air, and, of course, must be aggravated by it; great care should therefore be taken to prevent the air from stagnating in the patient's chamber.—When that is small, and cannot be well ventilated, the patient should be carried into the open air, and allowed to sit there two or three hours every day in mild weather. When this cannot be conveniently done, every means in our power to ventilate the room should be employed. Strong-scented herbs ought every day to be strewed about the room, and vinegar frequently sprinkled about

the bed-clothes, and some evaporated, by pouring it on hot iron. The bed-clothes ought to be in no greater quantity than is agreeable to his feelings, and when he can sit up, with his clothes loosely put on, it is often a refreshing change of posture and situation. The patient should have his linen and bedding changed often, and the stools removed as early as possible; for nothing refreshes the sick more than cool air and cleanliness.

In the early stage of this disease, where there is much preternatural heat, washing the face and hands often in cold vinegar and water, and wiping the body with wet clothes, will be highly refreshing; and in the more advanced stage of the disease, when there is less febrile heat, the vinegar should be united with an equal quantity of spirit. In all cases where the fever is unusually protracted, and leaves the patient in excessive weakness, the recovery is slow and precarious, and the greatest care is required to prevent any error in diet, during the convalescence, as a very small degree of excess at this time, will produce very troublesome consequences. Food of easy digestion, taken in small quantities, and often repeated; gentle exercise, when the weather is favorable; attention to prevent costiveness, by some mild laxative; and the use of bitters to assist digestion, or the rust of steel, when there is any prevailing acid on the stomach, are the most certain means of reinstating health.

*Contagion.*—Having in the preceding chapter enumerated the different means for the prevention of diseases, I shall now point out such as are most suitable to arrest the progress of contagion when commenced.

When a contagious fever makes its appearance, the first precaution is to separate the sick from the healthy, and thus to cut off, as much as possible, the intercourse between them. The next step should be, to purify both beds and clothes from every particle of filth. The chambers must be often fumigated, by burning good sharp vinegar or tar, and the floor washed daily with lie, or the solution of potashes, or strong soap-suds. A

cloth wetted in lime-water and hung up in the room, and replaced as often as it becomes dry, is also a great means of purifying infected air.

When a contagious disease originates on ship-board, quick-lime should always be added to the water which is used for common drink, in the proportion of one pound of quick-lime to a hogshead of water; but if the water be impure, a larger quantity of lime will be necessary; and some of it should be put also into the ship's well, to prevent the putrid and foul air arising thence.

When these means are ineffectual to stop the progress of any contagious disorder, fumigation with the nitrous vapor, will undoubtedly succeed; and the method of preparing it, is to put half an ounce of vitriolic acid into a cup, warm it over a shovel of coals, adding to it, by little and little, about the same quantity of powdered saltpetre, and stirring it occasionally with a slip of glass, as long as the vapor arises. The vessel is then to be carried about the room, the doors and windows being close shut, and put in every corner and place where it can be suspected there is any foul air; the fumigation to be continued for one or two hours every day, or oftener, until the contagion shall be destroyed.

If the vapor should irritate the lungs, so as to excite much coughing, fresh air should be admitted, by opening the door or windows of the room. However, after a little familiarity with it, this vapor will not offend the lungs, but on the contrary will prove highly grateful and refreshing.

The vapor of muriatic acid has also been successfully employed in purifying infected air, and destroying contagion. It is made use of in the following manner.—Put one pound of common salt into an earthen vessel, and pour over it, from time to time, a small quantity of sulphuric acid, till the whole salt is moistened. If the air be foul and peculiarly offensive, apply a gentle heat under the vessel to extricate a large quantity of vapor, but in general, the simple addition of the acid to the salt will be found sufficient, unless the apartment be very large.



As a purifier, the chloride of lime stands pre-eminent. A table-spoonful or so, may be put in a saucer, and moved from place to place in the room, or it may be mixed with a little water, and sprinkled over the floor and walls. Care should be taken, that the atmosphere of the room be not too highly impregnated with the fumes from this, or either of the articles above mentioned, otherwise, a troublesome cough, with soreness of the throat and breast, will be experienced by the patient and attendants.

On the first appearance of typhus, or any infectious disorder, in a jail, hospital, boarding-school, or any other place where many persons are crowded together, one of these gaseous fumigations should be employed in every room, in addition to a free ventilation and the greatest cleanliness.

An eminent physician of the marine barracks of Brest, states, that previously to visiting the hospital, he was in the habit of introducing into his nostrils sponge cut into proper size and shape, and moistened with some essential oil. He also kept in his mouth a piece of orange-peel; and in this simple method he escaped several putrid and pestilential diseases, which in one year killed eleven physicians and and one hundred and thirteen students.

Where any one is apprehensive of having caught infection, which may be suspected by a bad taste of the mouth, and want of appetite; an emetic should be given towards the evening, and on the patient going to bed he may be allowed a little mulled cider, or wine whey, with a small dose of the anodyne sudorific drops. (*See Dispensatory.*)

The warm bath, if such a luxury can be commanded, would here be found exceedingly refreshing and beneficial.

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### PROGNOSIS OF FEVERS.

In treating the prognostics of fevers generally, we shall first present some useful admonitions which are given in the symptoms of impending disease.



The prognostic of an impending disease may be drawn from the aspect of the countenance, the mode of living, the changes in habits or situations, and the critical period of life. If a person from a healthy state, become sallow, weak, with loss of appetite and spirits, or with disturbed sleep, we may reasonably suppose that some disease threatens. Should these indexes be gradually disclosed, with a countenance tinged lightly with yellow, obstructions in the liver have probably taken place; if more rapidly, with slight shiverings occasionally, a fever impends. A regular evening exacerbation, with cough, portends a hectic; a more violent shiver, with considerable heat, a continued fever; a deep redness in the face, with inflammation in the eyes, plainly point out accumulations in the head, and chiefly venous ones; but as these often arise from diseases impeding a free circulation through the lungs; so that the state of these organs must be considered in forming the prognosis. They often exist together, and aggravate each other. Violent, fixed pains in the head, recurring at regular intervals, and usually excited by every cause of increased circulation, generally show that some fixed obstruction prevents the free course of the blood through the organ; and this is followed by convulsions, sometimes by insanity, and frequently a sudden termination of life. A fullness in the stomach and abdomen are certain signs of accumulation, and it depends on the comparison of the other symptoms, whether it be obstructions of the viscera, accumulated contents, or mere flatulency: the prognostic must be regulated by comparing the symptoms of each disease.

The mode of life will often lead us to form some prognostic of an impending disorder. Late hours cannot be borne with impunity, except by very few; and their principal effect is to induce obstructions in the abdominal viscera. If connected with drinking spiritous liquors the effect is usually felt in the liver. The sedentary student has reason to apprehend biliary accumulations, with costiveness, and a train of hypochondriac symptoms. Excess in eating or drinking will equally lead us to foretel diseases of the stomach; but

retributive justice is frequently seen to punish the former error with the greatest severity, in the feelings of the patient, by the loss of appetite. Almost every situation is apparently consistent with health, if free air be admitted; but its deficiency leads to a variety of diseases from debility, which may be easily foreseen, and can only be avoided by a change.

Changes of habits and situations are frequently the source of different diseases, which we can often prognosticate, and sometimes guard against.

Abstemiousness, suddenly adopted after free living, and the contrary, are sources of disease, the former chiefly of complaints arising from insufficient stimulus, the latter from too great excitement. A sedentary, after an active life, is often attended with languor, low spirits, and visceral accumulations; the contrary, at first with languor and fatigue, soon followed by increased tone and vigor.

The critical periods of life merit attention also in our prognostics of various diseases. If scrofulous affections do not yield in the early period of life, there is little prospect of cure. The same may be said of epileptic fits and of Saint Vitus's dance, though to the latter there are many exceptions. The critical period of the female life is that of the cessation rather than appearance of the catamania; for unless hectic symptoms come on, the discharge, though at a much later period than usual, becomes regular. The period of cessation, if not preceded by free, often copious discharges of the menses, prognosticates a less healthy old age.

Prognostics in *diseases* are usually drawn from the *vital, animal, or natural* actions. The *vital* actions, which give the best information, are the states of the circulation and the respiration. The first is chiefly known by the pulse. But before we proceed farther on this subject, it may be proper to describe its action. The pulse consists in the reciprocal contraction and dilatation of the heart and arteries, by the former of which the blood is propelled through every part of the body. Much attention is required in feeling the pulse, since it often misleads, unless the practitioner be ac-

customed to its examination. In estimating its strength or weakness it is necessary to consider the sex, temperature, and age of the patient. The pulse in women is quicker than in men; in the sanguine than in the melancholic temperament; in youth than in age. During the first year of an infant, its pulse is from one hundred and eight to one hundred and twenty; during the second, from ninety to one hundred and eight; the third, from ninety to one hundred. It varies little till the seventh year, when it is about seventy-five; and in the following year scarcely exceeds seventy. These numbers are subject to great variety. The pulse is quickened after a full meal, or taking any stimulus; after exercise or any agitation; it is also quicker when standing than sitting, and in the latter posture than when lying down. In hysterical patients it is excited to an inconceivable rapidity by the slightest circumstances without portending danger. A fat person has naturally a weak pulse; but it beats, also, to a disadvantage beneath a layer of fat. This circumstance should also be attended to in our estimate. The size of the artery we can often estimate, for we can feel in thin persons, two-thirds of its circumference, and errors can scarcely arise from this source. A natural pulse is from sixty to eighty, more strictly from sixty-five to seventy-five. On feeling the pulse, the artery should be first felt gently, and if any doubt arise whether the pulse is weak, it should be compressed strongly with three fingers, and the two uppermost slowly raised. If the pulse be strong, and seemingly weak only from compression, the blood, rapidly returning, will strike fully the finger below. If really weak, it gradually recovers its former force.

A strong, firm pulse is consistent with high health; but if it strike the finger like a tense cord, it shows a tendency to disease, and if with this hardness, it be increased in frequency, inflammatory fever is present. A throbbing pulse, which strikes the finger with apparent but not real firmness, will sometimes be mistaken for what is styled the hard pulse. But this has not the same firm resistance which we have described. It strikes



sharply, but not strongly, and the relaxation is as rapid as the pulse is transitory. When there is internal irritation, the throbbing pulse will continue often to the last, showing, in every succeeding moment, its peculiar character more strongly; but in the commencement of fevers it often so nearly resembles the strong pulse as to deceive. A small pulse will also be mistaken for a weak one, unless by a practitioner of experience; but the lightness of its strokes depends on the small size, sometimes the depth of the artery. If a pulse be at fifty-five or sixty, there is reason to apprehend some compression on the brain. A constant pulse of ninety in a minute, rising occasionally to one hundred and eight, shows a considerable irritation in the system, and is not without danger.

If, in the early stages of fever, it rise to one hundred and twenty in a female, not peculiarly irritable, it portends considerable danger, either from debility or irritation. If at any stage it exceeds one hundred and twenty or considerably exceed it, except for a short time, we have the greatest foundation for apprehension.

An intermitting pulse is a mark of considerable debility, and prognosticates a dangerous disease. It is also a symptom of organic affections. This alarming view of the subject requires, however, some alleviation. An intermitting pulse is frequently owing to fullness of the stomach and bowels, and often arises from agitation of mind. It is also habitual; a circumstance not uncommon.

In such constitutions, the usual intermission, on the access of fever, often disappears, and the first symptom of amendment is the return of the intermission, which, at the end of the long fever, may appear alarming, if not connected with other favorable symptoms. In general, the favorable signs are, pulses more soft, somewhat fuller, and in a slight degree more slow. The unfavorable signs are, more thready pulses, as if the arteries were smaller, pulsations quick, weak, and irregular.

The state of the circulation is also known by the complexion. A sallowness, and a want of transparency show that the blood is not carried to the extreme vessels;



and even when the cheeks are flushed, if the skin round the lips and nose be of an opaque, sallow whiteness, the conclusion will be the same, and the strength of the constitution is considerably impaired. The appearance of the eyes is equally indicative of strength and weakness, and the character of the features is preserved in proportion to the remaining strength. Each appearance depends on the state of the circulation.

Respiration is a vital action connected with the state of the circulation, and of the greatest importance as a prognostic. Respiration, *slow, full, and deep*, shows the strength and all the vital organs to be unimpaired, and in every situation is highly favorable. The *weak, slight* and *insufficient* respiration, is, in general, a mark of weakness; the *suffocating* of obstruction, the *quick* of considerable irritation, exciting rapid expiration.—The *stertorcus* shows insensibility, from compression on the brain; the *stridulous*, inflammation of the trachea; the *rattling*, accumulations of phlegm often unconquerable; and the *intermittent*, attends the last efforts of expiring life.

The *animal* actions, from which we may draw prognostics, are, the *senses, muscular, action, and sleep*. Violent delirium is a symptom of active inflammation in the brain, and is dangerous only so far as it shows a violent acute disorder. The wandering delirium, in fevers of a low kind, is a symptom of no great danger, unless it come on early, and in a degree disproportioned to the state of the fever. In other complaints it will excite serious apprehensions, and shows that the inequality of excitement depends on debility. If it persists after the cessation of the fever, unless evidently in consequence of debility, there is reason to suspect an organic injury in the brain, and more so, if violent delirium have occurred in the early part of the complaint. Delirium, arising from want of sleep, is said not to be dangerous; but the want of sleep itself is generally owing to a languid inflammation of the brain. General restlessness is a symptom of the same kind.

Of the external senses, and their organs, the eye affords the most particular symptoms by which the event

may be foretold. The sensation of black spots, which induces the patient to pick the clothes, as if he could remove them, is a symptom of debility, and is attributed to a *partial* palsy in the retina. It is certainly a highly dangerous symptom, though by no means a desperate one, as it has been represented. A more dangerous symptom is double vision. It is, in general, an early symptom of hydrocephalus. When the eyelids fall, and can scarcely be elevated by the exertion of the will, it shows considerable weakness, and when the patient sleeps without closing them, great insensibility. The latter symptom is, however, often owing to an irregular contraction of the muscles of the eyes; for in such cases the pupil is drawn up under the lid. The symptom is not, however, on this account, the less alarming. The clear natural appearance of the eye is a favorable symptom; but too great brilliancy, or too quick motions of this organ, show approaching delirium. A severe fixed look, without an object, is a similar symptom. The appearance of the eyelids sometimes points out a weak state of the system, particularly when there is a blackness in the lower lid, towards the inner corner of the eye.

A noise in the ears, in fevers, is said to be a sign of approaching delirium, though frequently, a symptom of weakness only, and often occurs, from this cause, in week and old people. If this noise occur in the beginning of fevers, it is said to foretell a violent and a tedious disease. Hearing particularly acute is often a precursor of delirium; and without fever, it is the effect of strong excitement in the brain. Deafness in fevers is said to be a favorable symptom: we can, at least, observe that we have not found it unfavorable. Vitiated *taste* is very common, and offers no particular prognostic.

*Lassitude* on the attack of fevers, in so great a degree as to produce *fainting*, is always a very dangerous occurrence. If attended with a considerable wandering, the danger is greater.

It is a favorable sign if, in the beginning of a fever, the patient can sit erect with his head elevated. And, if the patient can support himself in bed, and occasion-

ally turn on his side, about the tenth or twelfth day, the circumstances are favorable.

*Sleep*, if calm and refreshing, is always a favorable symptom; but if, interrupted, broken by terror, excited by dreadful images in dreams; if, instead of tranquil rest, the patient starts, catches, talks in a hurried manner, though not conscious of terror, it is unfavorable — *Deep sleep* is itself a disease, and shows a considerable oppression on the brain; yet, at the period of a crisis, if attended with a soft pulse, moderately slow, and a soft, moist skin, it is salutary. After a crisis, the deepest long continued sleep is not dangerous, if not attended with stertor, (a sound like snoring,) or with a pulse preternaturally slow.

The *natural actions* which furnish prognostics, are, digestion and its consequences, and the various excretions. In fever the *appetite* is at once destroyed; nor is it a favorable sign, in an acute disease, that it should remain or return too soon.

The appearance of the tongue is of considerable importance as a prognostic. Whiteness of its surface is a sign of fever; and if white and dry, it shows the fever to be more considerable. In the progress of a fever it becomes brown, a darker brown, and even black; and these colors are usually seen when the tongue is dry and hard. While the edges continue clean; and of their natural, speckled appearance, there is little danger; and, indeed, fevers have terminated favorably, though the tongue has been for many days, dark, dry, and even black. The tongue, sometimes, in the course of fever, becomes suddenly clean, and of a shining red. This, in general, shows that the fever will be of long continuance. The tongue sometimes cleans slowly in elderly and debilitated constitutions. And, independently of fever, in such habits, the tongue is often black at the back part.

A heavy load on the stomach is an unfavorable symptom, unless it arise from indigestible food; since it shows either an accumulation of viscid mucus, or a want of energy in the organ. When the irritability of



the stomach is exhausted by excessive stimuli, the effect is a heavy load.

*Vomiting* is the connecting symptom between the affections of the digestive organs, and those of the secretory ones. When violent and incessant, without previous accumulation of bile, it is an unfavorable symptom, as it generally arises from irritation of the brain; even when, from bile, it is distressing, for the act of vomiting emulges the biliary duct, and the inverted motion of the duodenum carries the bilious matter back into the stomach, thus furnishing new fuel for the flame.

A frequent *diarrhæa*, independently of mucous inflammation, is dangerous, as it shows considerable debility, and a difficulty of retaining the food long as is necessary for its assimilation.

The other excretions, which have attracted attention as prognostics, are the *perspiration*; the *urinary* and *alvine evacuations*. It is generally acknowledged, that the salutary perspiration is not attended with heat, is not clammy to the touch, is generally diffused without any load, uneasiness, or anxiety. The sweat of an opposite kind does not relieve, but debilitate. Cold clammy sweats arise from a total relaxation of the exhalents, and are, in general, the preludes of death.

The state of the *urine* has also afforded numerous prognostics, and the discrimination of its clouds, its sediment, &c., has been peculiarly minute. The greater number of these appearances may be disregarded.—Urine must be examined only after it has been made for some time. It should be poured into a glass while yet warm, and kept in air moderately cold. With such precaution, some useful lessons may, perhaps, be drawn from its appearance.

The quantity of urine varies in different persons, and, in the same, at different periods. Hence, from this no conclusion can be drawn. In general, where it is remarkably deficient, it is at other times equally redundant; and this chiefly occurs in hysterical constitutions. The excess is also at no time dangerous, unless the quality of the urine is changed, since it only depends on



irregular action of the renal vessels. When the urine is in small quantity, its color is necessarily high; and at the conclusion of a gouty paroxysm, as well as of a paroxysm of an intermittent, it throws down a brick-colored sediment. When highly red, without depositing any sediment, it shows a violent, and probably a long fever. In general, a scum on the top, in the early period of fevers, seems to show considerable debility; and we have usually found such fevers slow and tedious. A cloud suspended at first near the top, and afterwards falling lower till in succession it reaches the bottom of the glass, are favorable signs; and a suspended cloud, previously to the fourteenth day, shows that the disease will terminate at that period. If it appear after the fourteenth day, the disease terminates at the twenty-first, gradually lessening on the intervening days.

The progress of the cloud in the urine, in case of fever, is regular. It is, at first, suspended at the top, gradually falls, though for a day or two, often stationary near the middle of the glass, and at last reaches the bottom. It falls to the bottom often some days before it is accompanied by any sediment; but when a white or reddish sediment also falls down, the crisis is nearly complete. The urine is sometimes turbid, if not at the moment of discharging it very soon afterwards; and this, according to the authors of prognostics, is said to show an insidious disease. Frothy urine, or which long retains the air bubbles, is said to show a tedious disease, or a slow consuming fever. In bilious fevers, the urine is sometimes of a green or black color, which shows a highly putrid state. The black is more dangerous, but unless highly fetid, we have frequently seen it without its being followed by a fatal event. In chronic diseases, red urine, depositing a copious, red, scaly, or branny sediment, is a mark of considerable debility. A mucous and viscid sediment is usually alarming from the apprehensions which it excites of abscess in the bladder. Mucus is, however, light and equable, wholly free from fœtor, and arises from an inflammation of the mucous membrane. It arises also from any irritation of

the neck of the bladder; and is a frequent symptom of gravel and calculus.

The nature of the *alvine discharge* is of considerable importance, and these should be frequently examined with attention. In acute diseases the discharge is often estimated by the number of motions rather than their appearance, and we have been told there has been a free discharge from the bowels, when the stools had not the slightest feculence. Liquid, frothy, watery motions, with little color or smell, denote, in general, a tedious fever, for in every fever there seems to be an obstinate retention of the fæces, and motions of this kind show that the spasm is peculiarly violent. When the stools, in the beginning, are highly fetid and bilious, it has been accounted a dangerous symptom; but if the discharge be free and copious, they are rather favorable. Calomel will, through the whole course of a fever, often bring off such motions by its superior power on the biliary secretion. Small, black, pitch-like motions, are always dangerous, and show equal weakness in the alimentary canal and the biliary system. On the contrary, hardened excrement, brought off with little straining or colic, is favorable.

From the remarks which have been offered, it will appear that our prognostics of fever must be taken generally from the signs and degree of debility. This is obvious often to the sight. Every circumstance which regards a patient in a fever, will, by attentive observation at the bed-side, throw some light on this subject.

The situation of the patient is dangerous, if the character of the countenance is soon lost; if the eyes apparently glare on vacancy; if the answers are rambling and incoherent; if slight, partial, involuntary contractions occur in the features; if the tongue trembles, or is soon dry and dark; if he soon declines turning on his side, lies on his back, and sinks down on his bed; if the extremities are cold and benumbed; if the tendons are particularly tense, and occasionally start; and if he appears to pick off or remove any dark spots on the bed clothes, or wishes some supposed dark object to

be removed: each of these symptoms is a mark of debility; and the earlier they occur in fever, the greater is the danger.

If, however, in a fever, the expression of the countenance is unchanged; if the mind is steady and unruffled; the sleep, though short and interrupted, refreshing, and the patient is sensible of having slept; if the tongue is clean at the edges; the abdomen neither tense nor painful; if the patient lies on either side, and awakes without hurry or confusion, we may prognosticate a safe termination.

In the more usual cases of fevers, if the disease has been properly managed in its earlier period, and the circumstances are on the whole favorable, there are few instances in which a salutary change does not take place on the tenth or fourteenth day. Where this is not observable, a gradual amendment takes place, which is clearly conspicuous on the seventeenth, and the fever has disappeared before the twentieth.

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### MILIARY FEVER.

This fever takes its name from the small pustules or bladders which appear on the skin, resembling, in shape and size, the seeds of millet. The pustules are either red or white, and sometimes both are mixed together.

The whole body is sometimes covered with pustules; but they are generally more numerous where the sweat is most abundant, as on the breast and back. A gentle sweat, or moisture on the skin, generally promotes the eruption; but when the skin is dry, the eruption is both more painful and dangerous.

Sometimes this is a primary disease; but it is much oftener only a symptom of some other malady, as the small-pox, measles, and nervous fever.

Thy miliary fever chiefly attack the idle and the phlegmatic, or persons of a relaxed habit. The young and the aged are more liable to it than those in the vigor and prime of life. It is likewise more incident to wo-



men than men, especially the delicate and the indolent, who, neglecting exercise, keep continually within doors, and live upon weak watery diet. Such females are extremely liable to be seized with this disease in children, and often lose their lives by it.

*Causes.*—Violent passions or affections of the mind, as excessive grief, anxiety, thoughtfulness, and fear; watching; great evacuations; spare diet; rainy season; eating too freely of crude, unripe fruit, as plums, cherries, cucumbers and melons; impure water, or provisions which have been spoiled by long keeping: the stoppage of any customary evacuation, as issues, setons, ulcers, the bleeding piles in men, or the menstrual flux in women.

This disease in childbed-women is sometimes the effect of great costiveness during pregnancy; it may likewise be occasioned by their excessive use of green fruit, and other unwholesome things, in which pregnant women are too apt to indulge. Such women as lead a sedentary life, especially during pregnancy, and at the same time time live grossly, can hardly escape this disease in childbed. Hence it proves extremely fatal to women of fashion, and likewise to those women in manufacturing towns, who, in order to assist their husbands, sit close within doors for almost the whole of their time. But among women who are active and laborious, live in the country, and take sufficient exercise without doors, this disease is very little known.

[Its most general cause, however, is the improper use of stimulating medicines in other diseases. "By a stimulating, sweating, and heating treatment, miliary vesicles may be produced in every variety of febrile disease." During the reign of the heating and sweating plan of treatment for fever, forty years ago, miliary fever was among the most common and fatal diseases; but since the introduction of the antiphlogistic and cooling method, it has become rare, and scarcely ever appears, except in its mildest form.]

*Symptoms.*—When this is a primary disease, it



makes its attack, like most other eruptive fevers, with a slight shivering, which is succeeded by heat, loss of strength, faintishness, sighing, a low quick pulse, difficulty of breathing, with great anxiety and oppression of the breast. The patient is restless, and sometimes delirious; the tongue appears white, and the hands shake, with often a burning heat in the palms; and in childbed-women the milk generally goes away, and the other discharges stop.

The patient feels an itching or pricking pain under the skin, after which innumerable small pustules of a red or a white color begin to appear. Upon this the symptoms generally abate, the pulse becomes more full and soft, the skin grows moister, and the sweat, as the disease advances, begins to have a peculiar, fœtid smell; the great load on the breast, and oppression of the spirits, generally go off, and the customary evacuations gradually return. About the sixth or seventh day from the eruption, the pustules begin in the skin.

It is impossible to ascertain the exact time when the pustules will either appear or go off. They generally come out in the third or fourth day, when the eruption is critical; but when symptomatic, they appear at any time of the disease.

Sometimes the pustules appear and vanish by turns. When that is the case, there is always danger; but when they go in all of a sudden; and do not appear again, the danger is very great.

In childbed-women the pustules are commonly at first filled with clear water; afterwards they grow yellowish. Sometimes they are interspersed with pustules of a red color. When these only appear, the disease goes by the name of a *rash*.

**Regimen.**—In all eruptive fevers of whatever kind, the chief points is to prevent the sudden disappearing of the pustules, and to promote their maturation. For this purpose, the patient must be kept in such a temperature as neither to push out the eruption too fast, nor to cause it to retreat prematurely. The diet and drink ought therefore to be in a moderate degree nourishing

and cordial: but neither strong nor heating. The patient's chamber ought neither to be kept too hot nor cold; and he should not be too much covered with clothes.—Above all, the mind is to be kept easy and cheerful.—Nothing so certainly makes an eruption recede as fear, or the apprehension of danger.

The food must be weak chicken broth, with bread, panado, sago, or gruel. Good apples, roasted or boiled, with other ripe fruits of an opening cooling nature, may be eaten.

The drink may be suited to the state of the patient's strength and spirits, If these be pretty good, the drink ought to be weak, as water-gruel, balm-tea, or the following decoction.

Take two ounces of the shavings of hartshorn, and the same quantity of sarsaparilla; boil them in two quarts of water. To the strained decoction and a little white sugar, and let the patient take it for his ordinary drink.

*Treatment.*—If the food and drink be properly regulated, there will be little occasion for medicine when the disease is primary—and when it is symptomatic, or brought on by improper treatment in other complaints, no regard is to be paid to it, but the original malady must be treated as though the miliary eruption had not appeared.

Some recommend blistering through the whole course of this disease; and where nature flags, and the eruption comes and goes, it may be necessary to keep up a stimulus, by a continual successsion of small blistering-plasters; but we would not recommend above one at a time. If, however, the pulse should sink remarkably, the pustules strike in, and the head be affected, it will be necessary to apply blisters to the inside of the legs, and thighs, and to the back of the neck.

Bleeding is seldom necessary in this disease, and sometimes it does much hurt, as it weakens the patient, and depresses his spirits. It is therefore never to be attempted, unless by the advice of a physician. We mention this, because it has been customary to treat this

disease in childbed-women by plentiful bleeding, and other evacuations, as if it were highly inflammatory.— But this practice is generally very unsafe.

Great sickness at the stomach is apt to precede any fresh eruptions that come out in the course of the disease, and to prove very distressing. To allay it, small doses of camphor mixture may be frequently given.— Where delirium or coma comes on, blisters will be proper. When a retrocession of the eruption takes place, the principal object will be to bring it out again, and keep up perspiration by means of powerful diaphoretics, as camphor, ammonia, frictions to the skin, external warmth, bathing the feet in warm water, &c.— When any considerable evacuation ensues on a retrocession, we must be careful not to check it hastily.— Should convulsions supervene thereon, musk and opium are strongly recommended.

[The use of purgatives is necessary throughout the continuance of the disease. They should be exhibited in such portions as to procure two or three consistent evacuations every day. Those mentioned in the treatment of intermittent fever are the best that can be selected for that purpose.]

To prevent this disease, a pure dry air, sufficient exercise, and wholesome food, are necessary. Pregnant women should guard against costiveness, and take daily as much exercise as they can bear, avoiding all green fruits, and other unwholesome things; and when in child-bed, they ought strictly to observe a cool regimen.

There is not any fever, in which the symptoms ought to be more carefully watched than in this. The changes are frequent and rapid, and the fever itself often assumes a quite different character. It is, therefore, of the utmost importance on such occasions, to change the regimen and medicines, and adapt them to the new symptoms.

## YELLOW FEVER.

*Symptoms.*—This disease is marked by three distinct stages: the first and second of which so much resemble other fevers that they might easily be mistaken for some other disease. The first stage consists in a broken or irregular reaction; and the second or middle stage in a general excitement throughout the whole system, similar to what occurs in ordinary fevers: the whole surface of the body is hot, the pulse full and strong, intolerable pain in the head and back, and insatiable thirst. Its duration is from one to forty-eight hours. Some fatal cases are destitute of this second stage; in which case the disease passes over from the first to the third stage without any reaction.

*Yellow Fever.*—The approach of the first stage of the disease is sometimes announced by an intoxicated appearance, great depression of spirits, great internal heat while the surface remains cold: yawning, stretching, aching of the bones, great oppression about the precordia, followed by pain in the head, back and stomach. The pain in the first stage is never so severe as in the stage of general reaction or second stage. Sometimes there is no pain in the first stage. Such cases are generally the most apt to prove fatal, as they indicate great insensibility. As the first stage advances, violent vomiting often comes on accompanied with spasms in the legs and arms. In the last stage there is apparently no fever and little or no pain. The patient often regains his strength so far, in most of cases, as to be able to walk about his room. The eyes are of a yellowish red and sparkling appearance. Black dissolved blood oozes from the mouth, gums, and nose; and a dark brown flaky vomit with but little exertion.—Spasms seize the muscles; the breathing becomes heavy, slow and irregular—attended often by a hoarse deep sound. The speech becomes incoherent, yet when the



patient is spoken to he collects himself sufficient to answer questions rationally. These symptoms though they all do not always accompany the last stage of disease, yet enough of them occur in every patient to point out the disease. In the last stage the bowels are uncommonly easily moved, for any common cathartic will now readily purge, notwithstanding the previous paralysis of the bowels; yet no bile is discharged; the sympathies of the various organs appear to be suspended, and the purgatives affect nothing but the alimentary canal. The disease generally terminates fatally on the third day, or the patient recovers speedily.—The milder cases run to the fifth day, and some protracted cases continue till the twentieth. The bright yellow skin seldom occurs till the third day: it is true the skin is yellow the third day, but of a muddy yellow wanting the glossy hue of the more protracted cases.

*Treatment.*—In the first stage when the system is deranged and entirely disorganized, the heat unequally diffused, the blood unequally determined, and secretion suspended, I find the best remedy to be tartar emetic in full doses. However, it is sometimes inadequate to make a sufficient impression on the torpid system. Its effects in this stage of the disease are not so soon apparent as in the healthy state of the system. Very often it does not appear to affect the system under an hour or more after it is given. If the emetic has the desired effect the temperature of the system becomes more uniform. And as the excitement comes on, great distress ensues in which the system arouses, in a measure, from its torpor and seems partially to regain its organic sensibility. The nausea and retching soon gives way to vomiting first of phlegm, then of bile.—This is alarming and very distressing to the patient; the powers of life seem like they are about to give up.—After the vomiting is over the patient gets, perhaps, a short sleep; soon reactions take place and disease passes into the second stage in which the reaction is general, and is accompanied with a hot skin, violent pain, full and strong tense pulse. The patient now complains of

excessive misery, which is a favorable symptom and shows that sensibility is restored. In some cases, in which in the first stage, the skin is cold, the reaction ataxic and scarcely perceptible, the stomach irritable and but little pain, tartar emetic in full doses will not produce vomiting. Tartar emetic will frequently operate as a powerful stimulant, raising the pulse, heating the skin, allaying the irritability and awakening one or more of the organs to active secretion. To have this effect it should be given in doses of from three to ten grains every one, two, or three hours in pills. And when secretion in this way has been brought about, this medicine should not be suddenly discontinued, but should be given at longer intervals, and in smaller quantities.—Should vomiting ensue before the skin has its heat and sensibility somewhat restored, no bile will rarely be evacuated, in which case another dose should be immediately given and repeated when nausea occurs. I have rarely seen this practice fail in such states of the system to check the vomiting, and heat the skin when mustard and blisters had failed. Those which are denominated cold cases, are the most hopeless. I have used the hot bath blisters, frictions, sinapisms and various other stimulants to bring on reaction, but have found none equal to tartar emetic alone, and in some cases, particularly in hard drinkers, it fails to produce secretion. Some might imagine these cold cases merely cases of congestion, and undertake to remove it by blood-letting, stimulants, both internal and external; but blood-letting in such cases would cause the patient to sink under it or immediately after. In the mild cases when left to nature the first stage continues but a short time and the disease passes into the second or that of reaction. These are the cases which bear bleeding and purging so well, and in which emetics are of no service, (unless given before reaction). Tartar emetic given in the first stage shortens its duration: and in proportion as the first stage is shortened, so is the stage of general excitement prolonged, thus giving more time to subdue the disease before it passes into the third and last stage.

Blood-letting in the first stage is in every sense imprudent: but in the second stage when the pulse is full and strong and the heat excessively increased over the whole surface, the patient hot, then we may bleed fearlessly and successfully. A small quantity of blood will not in this stage subdue the excitement, but it may be taken away, by quarts.

*Purgatives.*—At the commencement of the first stage, if purgatives are given, they sometimes produce secretion and bring about reaction, more or less general: but this is only in some of the milder forms of the disease. Drastic purges in almost any state of the system will bring away watery stools and exhaust the system without producing secretion. Purgatives so seldom produce secretions of the proper kind, even in the milder forms of the disease, and general reaction ensues so slowly, that the use of emetics instead of purgatives is much the safest and surest way. Purgatives, in conjunction with bleeding, (when the system indicates the use of the lancet,) are very good to bring about reaction in the second stage of the disease. When bleeding and purgatives are resorted to in the second stage of the disease, if, after tartar emetics have been given, the secretion is slow in developing itself, the purgatives may sometimes be given before bleeding; but in all cases in which general excitement quickly succeeds the use of tartar emetic, bloodletting should precede purgatives. Bleeding has a tendency to produce secretion only in the skin, the liver, and the kidneys; and sometimes bleeding alone will produce secretion in one or more of these organs.

If bilious dejection succeed the use of the lancet, and the kidneys refuse to secrete urine, then diuretics and not purgatives are indicated: for in such cases purgatives increase the torpor of the kidneys, prolong the disease and render it more difficult to manage. If all the organs continue torpid after bleeding, the practitioner will exercise his judgment whether he undertakes to produce secretion in the liver by purgatives, in the kidneys by diuretics, in the skin by sudorifics, or in the



glandular system by mercury. Although it is doubtless improper to administer various medicines at the same time, yet I find that those which possess two qualities are the most effective. For instance, if mercurial cathartics fail to produce secretion from the liver, they sometimes produce it in the salivary glands, and spirits of turpentine act on the kidneys or bowels. Whenever purgatives produce a secretion of bile, the fever, pain, oppression, thirst, and restlessness abate; and secretion in the other organs soon succeed that of the liver. But when purgatives are followed by copious, bloody, watery discharges, they exhaust the system, produce spasms, and serve to disconnect the sympathy of the various organs, and hasten the disease into the third or last stage. As the milder cathartics have all the good effects of the drastic purges, and none of their evil effects, I much prefer mild to drastic purges. The croton oil may sometimes be used in the place of other purgatives, as it is so pleasant to take, and can be retained in the stomach when other purgatives would be rejected.

*Mercury.*—Mercury given in the first stage of the disease, in the majority of cases, has no effect either on the system or disease; but given in the second stage, after the system is reduced by the lancet or other remedies, and has had time to run itself down, it will sometimes produce secretion of the skin, bile and urine, and bring on an organic sensibility of the whole system.—Under such circumstances, I never saw a person die either of bilious or yellow fever. There is a state of the system which occurs more often in bilious than yellow fever, in which I find the specific effects of mercury to be particularly servicable. After reaction is subdued; after the skin, kidneys and liver, have been excited into a secretory action—owing to some organ having, from some cause or other, sustained a great shock, a torpor will again take place in one or more of these organs, that produces great irritation of the system, preventing sleep, destroying the appetite, producing fever, and thereby exhausting more and more the



already too much exhausted patient. If the torpid organ be excited into a secretory action by any other remedy but mercury, as soon as it ceases to feel the impression of the remedy, it ceases to secrete; here mercury, by keeping up an impression, not transient, but permanent, will, by enabling the diseased organ to regain its powers, restore the patient to health. In the above state of the system, and in many others in which the specific effects of mercury are indicated, experience has proven to me that calomel in large doses is the best means to produce the effect desired.

*Diuretics.*—As a copious secretion of urine is a favorable symptom, and a suppression of it alarming and often fatal, diuretics are remedies in many cases of great importance. When purgatives do not produce a secretion of bile, instead of giving repeated doses of these medicines, to force away alvine discharges, which in such cases, are generally of a serious kind and serve to weaken the patient, I endeavored to excite the kidneys to secretion by diuretics. I have often found that diuretics, by producing secretion of the kidneys, are as advantageous as secretion of the liver by purgatives. Soon after secretion of the kidneys, the skin and liver will generally begin to yield their peculiar secretions, and the disease is thus conquered.

*Blisters.*—In every stage of the disease I have used blisters, applied to the head, stomach and extremities, without the desired effect. Sinapisms to the extremities, to assist tartar emetic, and the hot bath, to produce secretion in the cold cases; or after reaction had been reduced, to stimulate the prostrated patient, were far more servicable than blisters, as they act quicker and produce greater pain.

*Stimulants.*—Large and repeated doses of quinine at the commencement of the first stage are often attended with great success. The good effects of the quinine depend particularly on its transforming the broken excitement with which the disease usually commences, to

a general reaction, or open case of fever. Such stimulants as brandy or whiskey would cause inflammation of the stomach, while tartar emetic not only develops the fever, but cures any visceral inflammation it may have produced, by copious secretory action that succeeds.—The cold bath may be used when the skin is preternaturally hot, and the reaction will not yield to bloodletting. The tepid bath may be used when bloodletting does not leave an obstinate reaction, known by great heat of the skin, quick and irritable pulse, and great thirst; but when it leaves only a slight degree of morbid heat, which, nevertheless, requires to be carried off before the skin can regain its original sensibility and take on a proper secretory action. The hot bath should only be used in conjunction with emetics, in cold cases of the fever, in order to bring about general reaction. But if emetics are not used in conjunction with the hot bath the skin, it is true, would become hot, but its heat, like that of any inanimate substance, would subside on being removed into a colder medium.

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#### PNEUMONIA—INFLAMMATION OF THE LUNGS.

[A variety of terms have been employed to designate inflammatory affections of the pulmonary organs, according to the seat of the inflammation, and the structure of the part involved. When the pleura is inflamed it is called *Pleurisy*; when the parenchyma or substance of the lungs is affected, the title is changed to *Peripneumonia*; and when there is an engorged or congested state of the lungs, the disease is termed *Peripneumonia Notha*, or *bastard pleurisy*. When, in addition to the pneumonic symptoms, there is great pathetic derangement, the disease is called *Bilious Pleurisy*; and a rheumatism of the intercostal or neighboring muscles, is termed *Pleurodyne* or spurious pleurisy. Such of these distinctions as are valuable in a practical point of view will be retained.] And, first, of

## PLEURISY—PLEURITIS.

The pleurisy is an inflammation of the membrane called the *pleura*, which lines the inside of the breast. It is distinguished into the moist and dry. In the former the patient expectorates freely; and in the latter little or none at all. Pleurisy prevails, generally in winter and spring, among laboring people of a vigorous and plethoric habit of body, especially such as work without doors, and are of a sanguine constitution.

*Causes.*—Pleurisy may be occasioned by whatever obstructs perspiration, as exposure to cold winds; drinking cold fluids when the body is hot; sleeping on the damp ground; wet clothes; plunging the body into cold water; or exposing it to cold air when covered with perspiration. It may also be caused by the imprudent use of alcoholic liquors; violent exercise; blows on the breast; the stoppage of usual evacuations; or the recession of eruptions. Those who are accustomed to be bled at a certain season of the year, are apt, if they neglect it, to be seized with pleurisy.

*Symptoms.*—This, like most other fevers, generally begins with chilliness and shivering, which are followed by heat, thirst, and restlessness. To these succeeds a violent pricking pain in one of the sides among the ribs. Sometimes the pain extends towards the back-bone, sometimes towards the fore-part of the breast, and at other times, towards the shoulder blades. The pain is generally most violent when the patient draws his breath.

[The act of breathing is performed chiefly, if not altogether, by the action of the diaphragm and abdominal muscles, the motion of the ribs being restrained by the patient, on account of the increase of pain which it causes. Hence, the abdomen is in violent motion while the chest is quiescent. Attention to this circumstance alone, will always enable the observer to distinguish between pleurisy and inflammation of the bowels.]

*Diet.*—Nature generally endeavors to carry off this disease by a critical discharge of blood from some part of the body, by expectoration, sweat, loose stools, thick urine, or the like. We ought, therefore, to second her intentions by lessening the force of the circulation, relaxing the vessels, and promoting expectoration.

For these purposes, the diet, as in the former disease, ought to be cool, slender, and diluting. The patient must avoid all food that is viscid, hard of digestion, or that affords much nourishment; as flesh, butter, cheese, eggs, milk, and also every thing that is of a heating nature. His drink may be whey, or an infusion of pectoral and balsamic vegetables.

Barley-water, with a little honey or jelly or currants, mixed with it, is likewise a very proper drink in this disease. It is made by boiling an ounce of pearl-barley in three pints of water to two, which must afterwards be strained. These and other diluting liquors are not to be drank in large quantities at a time; but the patient ought to be kept continually sipping them, so as to render his mouth and throat always moist. All his food and drink should be taken a little warm.

The patient should be kept quiet, cool, and every way easy, as directed under the foregoing disease. His feet and hands ought daily to be bathed in lukewarm water; and he may sometimes sit up in bed for a short space, in order to relieve his head.

*Medicine.*—Almost every person knows, when a fever is attended with a violent pain of the side, and a quick hard pulse, that bleeding is necessary. When these symptoms come on, the sooner this operation is performed the better; and the quantity at first must be pretty large, provided the patient be able to bear it. A large quantity of blood let at once in the beginning of pleurisy, has a much better effect than repeated small bleedings. [It is customary to bleed until the patient can draw a long breath, and then close the orifice, but this practice is very inefficient, and renders subsequent bleedings necessary, while it endangers the patient by leaving the inflammation but partially checked. The



only efficient and safe course, is to make the patient stand up on the floor, while blood is drawn from a large orifice in one or both arms, until he faints, or is about falling. By this method, no more blood will be drawn than is actually necessary to arrest inflammatory action.]

If, after the first bleeding, the pain, with the other violent symptoms, should still continue, it will be necessary, at the distance of twelve or eighteen hours, to take eight or nine ounces more. If the symptoms do not then abate, and the blood shows a strong buffy coat, a third or even a fourth bleeding may be requisite. If the pain of the side abate, the pulse become softer, or the patient begin to spit freely, bleeding ought not to be repeated.

Warm fomentations applied to the chest are often of great utility in this disease, in allaying pain and abating the local inflammation. They may be made by boiling a handful of flowers of elder, camomile, and common melloes, or any other soft vegetables, in a proper quantity of water. The herbs may be either put into a flannel bag, and applied warm to the side, or flannels may be dipped in the decoction, afterwards wrung out and applied to the part affected, with as much warmth as the patient can easily bear. As the cloths grow cool, they must be changed, and great care taken that the patient do not catch cold. A bladder may be filled with warm water, and applied to the side, if the above method of fomenting be found inconvenient. Fomentations not only ease the pain, but relax the vessels, and prevent the stagnation of the blood and other humors. The side may likewise frequently be rubbed with a little of the volatile liniment.

Topical bleeding has often a very good effect in this disease. It may either be performed by applying a number of leeches to the part affected, or by cupping, which is both a more certain and expeditious method than the other.

I have often seen great benefit from young cabbage-leaves applied warm to the side in a pleurisy. These

not only relax the parts, but likewise draw off a little moisture, and may prevent the necessity of blisters; which, however, when other things fail, must be applied.

[Among the most effective remedies in the treatment of pleurisy, may be ranked blisters. As soon as the firmness and activity of the pulse are reduced, a large blister should be applied over the part affected, and suffered to remain on until completely drawn; and if, after the blister ceases to discharge, pain still continues, another should be immediately drawn on the other side of the chest. It occasionally happens, about the fifth or sixth day of the disease, that great difficulty of breathing comes on, with a total suppression of expectoration. In such cases, a blister applied to the inside of each thigh will rarely fail to relieve all unpleasant or unfavorable symptoms. To prevent or relieve strangury from the blisters, the following emulsion may be used:

Take    Mucilage of gum arabic, six ounces.  
         Sweet spirits of nitre, two ounces.

Mix—Give a table-spoonful every two or three hours.

In addition to this, the patient may drink freely of flaxseed-tea, or parsleyroot-tea; while warm fomentations are applied over the region of the bladder.

For the purpose of diminishing arterial action, and promoting expectoration, minute portions of tartar emetic may be exhibited with advantage. Care must be taken, however, that it does not produce vomiting; for experience abundantly testifies, that emetics, although valuable in the treatment of the bilious variety of pleurisy, are never beneficial in this form of the disease.—Two grains of tartar emetic may be dissolved in eight tablespoonfuls of water, and a teaspoonful of the solution given every hour.

Copious sweating induced about the time of the attack will often entirely put it off, or very considerably alleviate its violence. Of the diaphoretics employed in the early or forming stage of the complaint, one of the best is the root of the *asclepias tuberosa*, or common

pleurisy root. It excites perspiration, relieves the oppression of the chest, and promotes expectoration. (See *Materia Medica*.) A decoction of the seneka or rattle-snake root is highly spoken of by many practitioners, and by some it is looked upon as almost a specific in pleurisy; but they doubtless place too high an estimate on its virtues. After bleeding and other evacuations have been premised, the patient may take from two to four tablespoonfuls of the decoction, according as the stomach will bear it, three or four times a day.—If it should occasion vomiting, two or three ounces of simple cinnamon water may be mixed with the quantity of decoction directed; or it may be taken in smaller doses.]

If the patient do not perspire, but has a burning heat upon his skin, and passes very little water, some small doses of purified nitre and camphor will be of use.—Two drachms of the former may be rubbed with five or six grains of the latter in a mortar, and the whole divided into six doses, one of which may be taken every five or six hours, in a little of the patient's ordinary drink.

When the skin is very hot and dry, saline draughts, or a solution of acetated ammonia may be administered with advantage. To allay pain, ease the cough, stop diarrhœa, when it arises, or procure sleep, we may employ opium.

[One of the best formulæ for fulfilling these indications is the following :

Take	Solution of acetated ammonia, three drachms.
	Mint water, one ounce.
	Tincture of opium, twenty-five drops.
	Syrup of Tolu, two drachms.
	Antimonial wine, thirty drops.

Make a draught, and give it in two portions, one hour apart.

Although it is necessary to keep the bowels open in this disease, active purgation is uncalled for, and would seldom fail to prove prejudicial. Moderate doses of mild cathartics may be administered, as rhubarb, senna

castor oil, or the neutral salts, so as to keep up a soluble condition of the bowels.

It sometimes happens, after the violence of the disease has abated, that a tightness of the chest, a short cough, difficult expectoration, and some slight pain continue.—In such cases, nothing is so certain to give speedy and permanent relief as a combination of ipecac., calomel, and opium. One grain of opium in union with two grains of calomel and half a grain of ipecac., may be given every three or four hours.]

When the pain and fever are gone, it will be proper, after the patient has recovered sufficient strength, to give him some gentle purges, as those directed towards the end of an acute continual fever. He ought likewise to use a light diet of easy digestion, and his drink should be butter-milk, whey, and other things of a cleansing nature.

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#### PERIPNEUMONIA NOTHA.—BASTARD PLEURISY.

[Much difference of opinion has prevailed with regard to the nature and treatment of this disease. It seems, however, to be altogether owing to the fact, that two diseases, differing in their nature, and requiring very opposite remedies, have been confounded under one general title. The first of these is known by the name of

*Catarrhus Notha, or Suffocativus.*—It commonly attacks persons advanced in life, or those of a feeble and delicate habit of body, and children. It is distinguished by the suddenness of its onset; with panting, laborious respiration; a weak and irregular pulse; and by the prodigious accumulation of mucus or phlegm, which the patient is unable to discharge. The surface is cold and damp, with little or no active pain in the chest.

*Treatment.*—Moderate bleeding, if the system is



not too much prostrated, is advisable; but the utmost caution is necessary under such circumstances, in the abstraction of blood; and the greatest care should be taken not to urge it to any considerable extent at any one time. If venesection is not admissible, or has been resorted to without avail, an emetic should be immediately administered. Considerable advantage is derived from active vomiting, as by means of it the mucus is expelled, and the congested state of the lungs is relieved. Either ipecacuanha or white vitriol should be selected for this purpose. Each of them is characterized by promptness, and other qualities peculiarly adapted to the case.

After the operation of the emetic, a blister, large enough to cover the surface of the chest, should be applied. Although it may not be adequate to relieve all the symptoms, it will rarely fail to induce a more comfortable state of things. It is one of the safest and most efficient modes of depletion that can be employed.

Contrary to the usual practice in pulmonary affections, opium may be employed in this case with advantage, after the evacuations above mentioned have been premised. It may either be given alone, or in combination with squill, gum ammoniac, assafœtida, seneka root, or some other active expectorant.

The bowels should be kept open by such medicines as act very gently, and at the same time produce consistent discharges. Small doses of Cook's pills, or Lee's pills, will answer this purpose very well. Where they cannot be obtained, rhubarb alone should be employed as often as the condition of the bowels require it.—Active cathartics are always to be avoided; and, in many instances, warm corn-meal gruel will answer every purpose.

*Peripneumonia Fotha.*—In this disease the lungs are completely engorged with blood. Indeed, the complaint is a pulmonary apoplexy, and should be treated accordingly. Like the last disease it comes on very suddenly, so much so, occasionally, as to exhibit no premonitory signs. It is most apt to attack persons

who are debilitated by debauchery; though it often singles out the young, the robust, and the temperate. It is frequently the result of badly cured pleurisy.

It is known by impeded or interrupted respiration; a dry cough; quick pulse; a dull, heavy pain in the chest; a flushed, tumid countenance in the beginning; great anxiety and restlessness; a wild expression of the eyes; and, when the attack is peculiarly vehement, a total inability to change the position.

The disease is sometimes of an inflammatory character; but it is much more generally purely congestive.—The practice, however, is the same in both cases, with perhaps this difference, that in the congestive form, more caution must be exercised in the use of direct depletory measures. In congestion, the veins are chiefly concerned, while the arterial system is principally implicated in inflammation. It is always the case, without exception, that the balance of the circulation is destroyed by accumulations of blood in the great veins of the lungs, liver, brain, and other organs; and as a consequence of this, the surface is pallid, with more or less coldness of the extremities, the pulse is weak and impeded, with a feeling of oppression throughout the whole system, and extreme debility and prostration.—But when the arteries are affected, the usual indications of inflammatory action present—as a vigorous pulse, great heat and excitement, and perhaps uniformly some local pain or uneasiness. “In robust plethoric subjects, the febrile reaction in the early period of its course, is sometimes as vehement as in pleurisy.” “Unless the disease be promptly subdued, effusion into the bronchial cells will take place; the lips become purple; the face and extremities cold; the pulse small, laboring, and obstructed; the breathing short and incomplete; and at last drowsiness, partial coma, and suffocation, close the scene. (Hastings.)

In some cases, the disease is attended with great derangement of the liver; in which considerable tenderness is felt in the right side, with nausea, bitter taste, vertigo, head-ache, and dark colored stools, or obstinate constipation. In almost every instance, severe pain is

felt across the forehead, which is generally increased by coughing.

*Treatment.*—In congestive cases, the pulse, and degree of excitement in the system, are not to be the guide to practice. Consulting these, the practitioner would be discouraged from employing the lancet perhaps at the very moment when it is imperiously demanded by the loaded and oppressed condition of the veins.—But though the remedy be required for the relief of the patient, under such circumstances, blood must be abstracted with caution. It will be prudent, therefore, to draw away only a small portion at a time, and then, suspending the stream, to watch the effect. If the system bears it well, and particularly if the pulse becomes freer and fuller, the blood may be allowed to flow anew, until a sufficient quantity is taken to accomplish the end in view. Not less blood should be evacuated than in congestion of the brain; in short, relief must be afforded before the orifice is closed. In many cases it will be preferable to bleed from the jugular vein rather than from the arm.

In cases of an inflammatory type, the lancet should be resorted to without delay, and used as directed in the treatment of true pleurisy. A sufficient quantity of blood ought to be taken away at the first bleeding, as a repetition will seldom be borne well. In infants, a decisive bleeding at the commencement, will go farther towards checking the disease, than all other remedies that can be employed.

Purgatives may be employed with advantage in the first stages of the disease, particularly in cases of congestion or when the liver is implicated. Mercurial cathartics are preferable; such as are recommended in the treatment of intermittent fever; and should be so managed as to keep up a regular action of the liver and bowels. In the inflammatory variety, the bowels should be kept loose by the exhibition of mild aperients, such as castor oil or syrup of rhubarb.

Emetics are particularly serviceable in cases of children; and may be occasionally used with advantage in



adults. Wine of ipecac. is best suited to infants; or, a mixture of antimonial wine and syrup of squills, where the cough is dry. From fifteen to twenty drops of the former, with half a tea-spoonful of the latter, may be given every twenty minutes until vomiting is produced. This ought to be repeated as often as the accumulation of mucus in the air passages renders breathing difficult. Half a tea-spoonful of the wine of ipecac. may be given every ten or fifteen minutes, until the child vomits freely.

After blood has been drawn to a sufficient extent, a blister should be applied to the chest, and kept discharging by some irritating ointment, until convalescence is pretty far advanced. In the treatment of infants, cataplasms of mustard will generally afford speedy relief. They should be kept on until the skin is perfectly reddened, or blisters are produced.

As an auxiliary means, in either form of peripneumonia notha, inhalations of vapor into the lungs may be employed with benefit. The steam of warm water alone is useful; but its efficacy may be greatly increased by impregnating the vapor with something stimulating in its nature. An ounce of balsam of tolu may be added to half a pint of boiling water, and enclosed in a teapot, and the vapor inhaled through the spout.—Holding a cup of ether to the mouth will often give relief. The fumes of common rosin may often be inhaled with benefit.

The more urgent symptoms being relieved by the preceding remedies, a combination of calomel, opium and ipecac., given every two or three hours, is an important remedy. It is particularly useful in the secondary stage of the disease, in persons advanced in years. It represses difficulty of respiration, promotes the discharge from the bronchia, and allays cough.—One fourth of a grain of opium, one grain of ipecac. and five grains of calomel, may be given at a dose. If the gums become tender the calomel may be omitted.

In the early period of the disease, an infusion of slippery-elm bark, flaxseed-tea, or other mucilaginous mixtures, may be freely used; together with minute



portions of tartar emetic. After the general arterial action has been subdued, expectorants of a more stimulating character many be resorted to ; as seneka snake-root, camphor, or the carbonate of ammonia.

The temperature of the chamber in which the patient lies is a matter of much importance. It should be kept comfortable and uniformly warm. Variations of temperature are exceedingly apt to have a prejudicial effect.

Through the whole course of the disease, the antiphlogistic regimen must be observed. In cases of great debility, after convalescence has commenced, weak infusions of columba or gentian may be given.]

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### PARAPHRENITIS.

The *paraphrenitis*, or inflammation of the diaphragm, is so nearly connected with pleurisy, and resembles it so much in the manner of treatment, that it is scarcely necessary to consider it as a separate disease.

It is attended with a very acute fever, and extreme pain in the part affected, which is generally augmented by coughing, sneezing, drawing in the breath, taking food, going to stool, making water, &c. Hence the patient breathes quick, and draws in his bowels to prevent the motion of the diaphragm ; is restless, anxious, has a dry cough, hiccup, and often delirium. A convulsive laugh, or rather a kind of involuntary grin, is no uncommon symptom of this disease.

Every method must be taken to prevent suppuration, as it is impossible to save the patient's life when this happens. The regimen and medicine are in all respects the same as in pleurisy.

## PERIPNEUMONY,

OR, INFLAMMATION OF THE LUNGS.

As this disease affects an organ which is absolutely necessary to life, it must always be attended with danger. Persons who abound with thick blood, whose fibres are tense and rigid, who feed upon gross aliment and drink strong viscid liquors, are most liable to peripneumony. It is generally fatal to those who have a flat breast, or narrow chest, and to such as are afflicted with asthma, especially in the decline of life. Sometimes the inflammation reaches to one lobe of the lungs only, at other times the whole of the organ is affected, in which case the disease can hardly fail to prove fatal.

*Causes.*—Inflammation of the lungs is sometimes a primary disease, and sometimes it is the consequence of other diseases. It proceeds from the same causes as the pleurisy.

*Symptoms.*—Most of the symptoms of a pleurisy likewise attend inflammation of the lungs; only in the latter the pulse is more soft, and the pain less acute; but the difficulty of breathing, and oppression of the breast, are generally greater.

[ In violent cases, tending to disorganization of the inflamed part, the countenance presents a livid appearance, and the veins of the neck become apparently very much enlarged, This disease may generally be easily distinguished from pleurisy. "In peripneumony, firm pressure on the abdomen with hands, so as to push up the diaphragm against the lungs, almost invariably excites cough, great oppression, and a sense of suffocation; whereas, in pleurisy, no such effects result from abdominal pressure." ]

*Diet.*—As the regimen and medicine are in all respects the same in true peripneumony as in pleurisy,

we shall not here repeat them, but refer the reader to the treatment of that disease. It may not, however, be improper to add, that aliment ought to be more slender and thin in this than in any other inflammatory disease. The learned Dr. Arbuthnot asserts, that even common whey is sufficient to support the patient, and that decoction of barley, and infusions of fennel-roots in warm water with milk, are the most proper both for drink and nourishment. He likewise recommends the steam of warm water taken in by the breath. If the patient have loose stools, but is not weakened by them, they are not to be stopped, but rather promoted by the use of emollient clysters.

When an inflammation of the breast does not yield to bleeding, blistering, and other evacuations, it commonly ends in suppuration, which is more or less dangerous, according to the part where it is situated.—When this happens in the pleura, it sometimes breaks outwardly, and the matter is discharged by the wound.

When the suppuration happens within the substance or body of the lungs, the matter may be discharged by expectoration; but if the matter floats in the cavity of the breast, between the pleura and the lungs, it can only be discharged by an incision made betwixt the ribs.

If the patient's strength does not return after the inflammation is to all appearance removed; if his pulse continue quick though soft, his breathing difficult and oppressed; if he have cold shiverings at times, his cheeks flushed, his lips dry; and if he complain of thirst and want of appetite, there is reason to fear a suppuration, and that phthisis, or consumption of the lungs will ensue.

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## BILIOUS PLEURISY.

[This disease is most commonly met with in miasmatic districts, where intermittents have previously prevailed; and it often retains to a certain extent the

intermittent type. It generally occurs in cold and variable seasons, and is not unfrequently of a most intractable and fatal character.

To all the symptoms of ordinary pleurisy, are added, in this case, most of those appertaining to the common autumnal bilious fever of our country. It is accompanied by considerable head-ache; redness of the eyes; tumid countenance; much gastric distress; a violent vomiting of bile; with a dark and furred tongue.

*Treatment.*—In addition to the superadded symptoms, this disease differs from the ordinary form of pleurisy, in being less actively inflammatory in character, and consequently in not bearing direct depletion to the same extent. As the disease usually presents itself, the system is often manifestly depressed by one or two bleedings. When this happens, the lancet must be laid aside. But, whenever the pulse will bear it, venesection should be resorted to, until the pleuritic symptoms are subdued.

Emetics and mercurial cathartics, are of the utmost importance in the treatment of bilious pleurisy. An emetic exhibited early in the disease, will often, in addition to cleansing the stomach, and relieving local determinations, allay the pain in the chest as by a charm. A single emetic will often perform a perfect cure.

Purgatives should be continued through the whole course of the disease, as directed in bilious fever.

For relieving the pain in the chest, after the pulse becomes soft, a blister should be applied of sufficient size to embrace the whole breast. In order to do good it must remain on long enough to draw well; and the discharge must be kept up as long as possible by the application of stimulating dressings. The benefit derived from it will be exactly in proportion to the amount of the discharge.

Dr. Chapman speaks in the highest terms of the efficacy of the seneka-root in this affection. He recommends it to be given in decoction after the depletory measures mentioned above, have been carried into effect.



Copious draughts should be taken; the object being to excite and keep up profuse perspiration for ten or twelve hours.

The general principles applicable to the treatment of bilious fever and of pleurisy, are to control the treatment of this disease.]

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## COLD.

Or, in the language of the nosologists, Catarrh, is a disease of the inflammatory kind, which occurs more frequently on sudden changes of the weather, and attacks persons of all constitutions, but especially those of consumptive habits.

It is also at times epidemic, when it is known by the name of *influenza*, and has been erroneously considered as depending upon a specific contagion for its cause.

The influenza generally pays us a visit every six or seven years. The season of its visitation is the middle or latter end of autumn, after a long spell of dry weather. It would appear to be no respecter of persons, knocking equally at the door of the rich and the poor, and attacking the young no less than the aged.

*Symptoms.*—Its first symptoms are a stoppage of the nose, dull pain, with a sense of weight in the forehead; stiffness in the motion of the eyes, and soon after cough, hoarseness, an increased secretion of mucus from the nose, and tears from the eyes, attended with more or less fever, and sometimes sore throat.

*Cause.*—This disease is generally the effect of cold, which, by obstructing the perspiration, throws the redundant humors upon the nose, fauces, and lungs; or those great physical changes which give rise to epidemics.

*Treatment.*—The treatment of this disease, as of all others of an inflammatory nature, consists of the antiphlogistic, or cooling remedies. Where it is slight, little

else will be necessary than to pay attention to the state of the bowels; live abstemiously, avoid cold, and whatever may increase the feverish habit.

Bathing the feet in lukewarm water, or bran and water, a little hotter than milk just taken from the cow, at the same time that something warm, as a glass of hot toddy, punch, or mulled wine, is taken internally, forms a remedy upon which many people place their sole reliance for the removal of their colds. But this, unquestionably, is a hazardous practice; for it may be regarded as a general rule, in inflammatory diseases of whatever description, that all attempts to excite perspiration, by stimulating and heating drinks, will be uniformly injurious.

Foot-bathing is certainly a simple, and often found to be a powerful assistant of the operation of other remedies, by equalizing the circulation and promoting perspiration. In this practice, however, much caution is necessary not to get fresh cold; the feet should be carefully and speedily wiped dry, and afterwards wrapped up in a warm dry flannel, or the patient should immediately go into a warm bed.

When there exists any febrile action, the free use of cold water, in the early stage of the disease, forms a safer and a much more efficacious remedy than the administration of warm or stimulating liquors. A glass or two of cold water, taken upon going to bed, is a very common, and sometimes a successful remedy for cold.

The impression of cold drink upon the stomach, independently of its general refrigerent operation, seems to have the effect of promoting the action of all the secretory and excretory vessels. Taking a draught of cold water every hour or two, with ten or fifteen grains of nitre dissolved in it, will be found a remedy as effectual as it is simple in almost every case of inflammatory catarrh. Should it be observed that the nitre has a tendency to increase the cough, nauseating doses of tartar emetic should be added to each draught of cold water; which promote expectoration as well as diaphoresis, without, at the same time, increasing arterial

action. When recourse is had to this medicine, dissolve three grains of tartar emetic in a quart of pure cold water, of which solution a gill to a half pint may be given to an adult every three or four hours, or at such intervals as will produce a very gentle nausea, without creating any considerable degree of uncomfortable sensation. The consent of the stomach with every part of the animal system is so generally acknowledged, that this organ is now admitted to be the medium through which almost all medicines, taken internally, produce their effects upon every part of the frame. Hence, cold applied to this viscus must be attended with more speedy and certain effects than to any other part whatever. Its operation in this case is simple: it produces its effects merely by the abstraction of the stimulus of heat.

Although it will be admitted these two plans of cure, however contradictory, have both occasionally succeeded, yet the cool mode of treatment, when employed with a due degree of circumspection, is unquestionably the most advisable, for the successful removal of the disease in its incipient state. Of all the improvements which have been made for many years, in the practice of medicine, the introduction of the use of external cold, in the treatment of acute disease may be regarded as one of the greatest importance. The theory upon which it is founded is rational, and the practice to which it has led, has been attended with the most happy effects. In fevers, inflammations, and eruptive disorders, it has restored thousands who would otherwise have perished; but its free and extensive use in catarrh, is inadmissible, as, by exposing the body afresh to a low temperature, the original mischief would be often spread wider, or the foundation would be laid for other diseases more formidable. However, upon the accession of the symptoms indicating the commencement of the disease, the air which immediately surrounds the body, and which is inhaled in respiration, should be as cold as is consistent with comfortable feeling. Perhaps a temperature from forty to fifty degrees, will be most salutary. An approximation to this may always be effected by the pa-



tient remaining, in cold weather, in a room warmed only by a small fire; and, in other milder months, by a free exposure to the open air; in all cases carefully avoiding the causes which operate in rendering the cold air injurious. The covering of the body, both day and night, should be as light as the external temperature will allow, and every thing taken in the stomach should be perfectly cold. By pursuing the refrigerating plan, the activity of the whole arterial system is diminished, the inflamed vessels are relieved from that redundancy of blood, and increased action, in which the disease consists, and finally recover their wonted healthy tone without any morbid relaxation of their extremities. Whereas, the mode of treatment which admits of warm drinks, warm rooms, and warm air, when it operates in a manner the least dangerous, produces, by excessive excitement, such a relaxation of the exhalents of the bronchiæ, as to admit of a secretion of mucus, or pus, which, though it relieved the topical inflammation, by what is called expectoration, either lays the foundation for chronic catarrh, or terminates in consumption.

Full vomiting, at the commencement of the complaint, will seldom fail to prevent its further progress.—The operation of an emetic, besides its more immediate effects in evacuating the contents of the stomach, produces such a universal commotion in the system, as to excite every minute fibre into action; and in this way it is that emetics prove salutary in the majority of complaints in which they are administered. They excite a new and powerful action, which expels or overbalances the pre-existing weaker one. Thus they arrest the progress of fever, and thus, if administered at the accession of catarrh, they would prevent the occurrence of the symptoms which would otherwise infallibly ensue. In three cases out of four, perhaps, if upon feeling a stuffing of the nose, dull pain in the head, sneezing, and other symptoms which mark the commencement of the complaint, a person has resolution to try the experiment, he will find a brisk emetic have the effect of completely restoring him to his natural feeling. Emetics will also prove beneficial, not only at the commence-



ment, but at other periods of the disease, particularly when the lungs are oppressed with phlegm.

In the treatment of this complaint, the indications which arise to be fulfilled, may be reduced to the following heads:—To reduce inflammatory action in the early stage—to palliate early symptoms—and to diminish irritation in the protracted stage.

When the disease is violent, aperient medicines, in conjunction with bloodletting in a larger or smaller quantity, should be resorted to, and repeated as the symptoms may require.

Although the occasional use of aperients is indispensable, and should be had recourse to early in the complaint, yet very active purging is often found more prejudicial than servicable, by diminishing expectoration. The saline aperients, as Epsom or Glauber salts, in the form of the cathartic mixture, (*see Dispensatory*,) have the advantage over others in febrile diseases, being sedative and cooling. Those, however, who have an aversion to salts, may substitute any other opening medicine, as castor oil, rhubarb, sulphur, and cream of tartar, or senna and manna. But the purgative which of all others is most powerfully febrifuge, is calomel, which may always be administered with perfect safety, provided the patient guard properly against imprudent exposures to wet and cold at the time he is under its operation, and there is no peculiarity of temperament that militates against its use. When recourse is had to calomel, give it in the form of the aperient and diaphoretic pills, (*see Dispensatory*,) or conjoin therewith a few grains of ipecacuanha, or a small portion of tartar emetic; and in a few hours after swallowing the medicine, or, if it be taken at bed time, on the next morning, give a small dose of Epsom salts or castor oil.

In catarrh, the means which nature occasionally takes for its removal, or, in other words, the symptoms which make its critical or spontaneous termination, are, principally, a copious and equable flow of sweat, an increased secretion of mucus from the membrane of the trachea and bronchia, the production of a diarrhœa;

and hence, an indication for the use of *diaphoretics*, *expectorants*, and *laxatives*. Therefore, with the view of regulating and promoting the salutary effects of nature, it is advisable, during the interval of purging, if the skin remain obstinately dry, and there exist a general feverish disposition, to give the saline mixture in the state of effervescence, spirit of Mindererus, the febrifuge mixture or drops, Dover's antimonial, or febrifuge powders, (*see Dispensatory*,) or infusion of seneka root, in their usual doses, with diluting liquors; as flax-seed, balm or ground ivy teas, weak wine, whey, barley water, &c., in order to produce a termination to the surface.

When the cold chiefly occupies the head, it has been advised, to suffer the whole head to remain, for a considerable time, in contact with the steam of water, as hot as the patient can bear. And this is to be done in the following manner:—While the patient sits up in bed, a vessel containing two or three quarts of water, may be placed immediately under and before his face, letting it rest on his lap, and a piece of flannel or thin blanket being put over the head. and extending under and around the pan; this will keep the steam in contact with the face, neck, and head, and at the same time, will admit sufficient air for respiration. In cases of great stuffing up of the nose, and difficulty of breathing through the nostrils, this practice, has frequently had the effect of removing these symptoms in the course of a few hours; but it is seldom successful, where there are considerable pain and oppression at the fore-part of the head, in consequence of some inflammation occupying the cavities communicating with the nostrils. In such cases, a pinch of snuff, united with Cayenne pepper, has afforded some relief. But where the pain is extremely severe, the patient will experience most relief from a blister applied to the back of the neck, or to one or both temples.

When the mucous membrane of the nose is much affected, it should be washed frequently with a thick mucilage of gum arabic, or pith of sassafras, (*see Materia*

*Medica*.) or smeared, from time to time, with a little tallow, thorn-apple, or simple ointment, (*see Dispensatory*.)

An inflammation of the throat, producing soreness and difficulty of swallowing, is an occasional symptom of this complaint; and where it is slight, it will readily be removed by taking the nitre lozenges, (*see Dispensatory*.) or small portions of nitre in the mouth, and swallowing them as they slowly dissolve. Where it is of a more severe nature, the application of onions to the feet, (*see Materia Medica*.) or the remedies advised under the head of sore throat must be resorted to.

In case of pain or oppression at the breast, after the inflammatory action of the system is pretty well subdued, the application of a blister as near as possible to the affected part should not be omitted.

The most prominent symptom of cold is *cough*, which, being uniformly present, and often very distressing, is usually that to which the patient directs the chief part of his attention. The medicines to be resorted to for the purpose of alleviating cough, and producing expectoration, are mucilaginous and sheathing drinks, as flax-seed tea, barley-water, &c., or taking now and then, a tablespoonful of the flax-seed syrup, or a teaspoonful of equal parts of sweet oil and honey, or a mixture composed of one part oil, and two of honey and syrup, or some of the more simple pectoral mixtures. (*See Dispensatory*.) After the inflammatory symptoms have abated, the pectoral mixtures combined with laudanum or paragoric, (*see Dispensatory*.) will afford the greatest relief; and where the patient's rest is particularly disturbed in the night, an opiate at bed time will be highly necessary, but it should be combined with some diaphoretic, as in the form of the anodyne sudorific bolus or draught, (*see Dispensatory*.) or by giving two parts of the paregoric with one of antimonial wine in some warm tea.

Barley, hoarhound, and sugar candies, liquorice, and various syrups, of indigenous simples, are universally employed for the purpose of allaying the tickling which produces cough. The effect of all remedies of this

kind, is to smear over the glottis or fauces, and, by thus sheathing them, rendered them less susceptible to the irritation. As they have the advantage of being innocent, and are usually found to afford a temporary relief, they may, in every case, be resorted to with advantage, as palliatives.

Whenever a cold, either in consequence of its severity, or from its having been neglected in the first instance, runs out to a considerable length, it is usually kept up by a state of simple irritation of the part, which supervenes upon the disappearance of the inflammation, and becomes as it were habitual, exciting the vessels to an increased secretion of mucus, and producing cough by sympathy with the larynx. In this protracted stage of the complaint, when the cough and spitting alone remain, it is absolutely necessary that the patient should carefully guard against all unnecessary exposure to cold, and to defend particularly the breast and feet; and when obliged to go into an air of low temperature, to increase his clothing, and hold a thin pocket handkerchief before his mouth and nose. The vessels are in a state of relaxation or debility, when the cough is long protracted, and the consequence of any unusual application of cold is very generally a suppression of their exertions, and a subsequent renewal of the inflammatory affection. And it is in this way that colds are often kept up for months, until they degenerate into a permanently morbid state of the lungs. In such cases, the nitric lac ammoniac, (*see Dispensatory*), in doses of a tablespoonful in a cup of flax-seed tea, or sweetened water, every four hours, to adults, will be found a most valuable remedy. Benefit will also be derived from wearing a Burgundy pitch, or some warm adhesive plaster, upon the breast, or between the shoulders.

Should these means prove ineffectual, one or two grains of calomel, with a double quantity of powdered squills, taken by an adult at bed-time, and continued until a ptyalism be produced; and afterwards the nitric lac ammoniac, administered as above directed, may be depended upon.

Another remedy which has succeeded in this state of



the disease, is the tincture of digitalis, in doses of ten drops, three times a day, to adults, and its efficacy will be increased, by using the vapor bath.

Inhaling the vapor of hot water is a remedy which has long been in use, in all inflammatory complaints of the chest. However, upon the first commencement of catarrh, it has the effect of rendering the subsequent symptoms more severe; but at a more advanced period of the complaint, it tends powerfully to arrest its progress, by increasing the secretion from the glands and vessels of the part, and thereby diminishing their inflammatory action. The vapor has been found most efficacious when impregnated with vinegar or camphor, or infusions from emollient herbs. The inhaler, invented by Dr. Mudge, of England, is well adapted to render the process perfectly convenient for children. But a common funnel will form a very good succedaneum for the inhaler, when this cannot be conveniently procured, the broad part being inverted over a vessel containing the water, and the steam being received by the mouth applied to the small end. Should a funnel not be at hand, a tea or a coffee pot, may be substituted, and the operation continued from a quarter to a half hour. In this manner, the vapor bath may be received twice or thrice a day, carefully avoiding sudden exposure to the external cold air. According to Dr. Mudge, a teaspoonful of paregoric, taken at bed-time, in some warm liquid, and the use of the warm vapor arising from simple water, through this machine, will be sufficient to cure a catarrhus cough in a night's time.

An unpleasant and not unfrequent sequel of this complaint, is a hoarseness, or diminution of voice, depending upon a state of the muscles subservient to speech, approaching to palsy. This is generally of a temporary nature, though it has been known to continue for several months. In such cases the infusion of seneka root, with one fourth of honey, has been employed in doses of a tablespoonful every two or three hours, and, at the same time, some of it used as a gargle, with the most happy effects. It has also been readily cured by taking a teaspoonful of the syrup of horse-radish every every

hour or two; or by retaining in the mouth a piece of this root, or by gargling the throat frequently with an infusion of red pepper, mustard seed, or horse-radish.— This symptom has been known to be instantly removed by means of electricity, and also by inspiring oxygen, or pure air. It is of importance, if the patient be in a debilitated state, to invigorate his constitution by nutritious diet, regular exercise, and removing to a more salubrious air. A popular writer of considerable celebrity, Dr. White, states a case in which not only a loss of voice, but a partial palsy of the muscles of deglutition, producing an imperfect, and, at times, a total incapacity of swallowing, ensued upon the disappearance of a severe catarrh, attended with sore throat; and which did not go off for the space of a month. In this case, the patient was in the habit, previously to an attempt of deglutition, to suffer a teaspoonful of brandy to pass over the affected parts; after which, she immediately became capable of swallowing with ease, but again lost the power of doing so, after the effect of the stimulus had worn off.

Should hoarseness occur in the inflammatory or early stage of the disease, inhaling watery vapors, bleeding, cold water, and demulcents constitute the proper remedies

Although the attendant symptoms of cold, in its incipient stage, seldom amount to such a degree of urgency as to demand the antiplogistic mode of treatment in its more active forms; yet if it be aggravated or rendered frequent in its return, by neglect or imprudence, it becomes a malady, which not only combats, but often defeats the skill of the most experienced physician. And it should be remembered whenever the cough is frequent, the fever considerable, and the breathing intercepted by transient pain, or tightness of the chest, unless the most powerful means, as bleeding, purgatives, and blistering, with diluting drinks, be early employed, inflammation of the lungs, will succeed, which, if not speedily removed, will inevitably terminate in consumption.

I have now presented to my readers, in a manner familiar to every capacity, the most approved plan of

cure of this destructive complaint. Should it be adopted in the domestic management of colds, I shall not have wholly failed in my earnest endeavors to lessen some of the dreadful ills ; for, of all the diseases incident to the human species, there is none so frequent in its occurrence—none which excites so little attention—and none, perhaps, when neglected, is so often followed by fatal consequences, as that under the name of *cold* or *cough*. It is the rock upon which the health and lives of thousands have been wrecked.

The frequency of this disease, from the sudden changes of weather to which our climate is subject, and the slight degree of alarm generally excited by what is called "*only catching a cold*," too often occasions that neglect, which gives rise to the most distressing maladies, such as quinsy, pleurisy, inflammation of the lungs, rheumatism, &c.

Fully satisfied that numbers fall victims to the supposed insignificance of this insidious enemy, I have thought it my duty thus to warn the inattentive.

**Regimen.**—A rigid attention to diet, is not to be looked for at the occurrence of every slight attack of cold ; but when the disease rises to such a degree as to produce a state of general febrile indisposition, it will be absolutely necessary for the patient to abstain from every thing of a stimulating nature. He should confine his diet to light things, of easy digestion, as arrow-root, sago, tapioca, rice-milk, custards, jellies, fruits, &c. &c. When the symptoms are so trifling as not to render an abstinence from animal food requisite, those means of a more digestible nature should be chosen ; and if the patient has been accustomed to the use of spirituous liquors, he should substitute for them, porter, cider, or wine, diluted with water. Every thing which either stimulates the glottis and fauces in deglutition, or proves indigestible after being received into the stomach, invariably increases the cough, and consequently is injurious.

**Prevention.**—To guard against this disease, the ut-



most attention should be paid to a due regulation of the clothing, which ought to be neither too thin, nor so irregularly-disposed as to leave one part of the body naked, whilst the rest is burdened, and too warmly clad; an error frequently committed among children and young persons. Warm rooms and impure air may weaken the body, but warm clothing can never be injurious in cold weather. The use of flannel cannot be too highly recommended as a preventive of this disease; and if an objection should be made to wearing it next to the skin, on account of the irritation it occasions, it may be worn over the linen.

But, while thus careful to guard against the morbid influence of cold, by accommodating our dress to the weather, we should be equally cautious not to run into the opposite extreme. Too much clothing produces a delicacy of frame that disposes no less to disease than an imprudent disregard of necessary covering.

There are too parts of the body more especially liable to receive the ill-impressions of cold, and communicate them to the rest—the feet and the chest, and, with the delicate and susceptible, if fashion govern in all other respects, these, at least, should be defended with the utmost care.

Whenever the whole or a part of the body has been exposed to the long continued action, or otherwise, to the sedative influence of cold, it is said to be chilled, or, in other words, it falls into a state of atony, in consequence of the reduction of its nervous energy, and is thereby deprived of the faculty of duly supporting its natural heat.

This state, occurring universally, and to a great extent, usually proves destructive to life. When local or general in a less degree, it proves the exciting cause to various diseases of the active kind, determined in their seat by the particular predisposition of the person; the weakest part of the body invariably receiving the noxious impression, however generally applied. Thus, those whose *pulmonary system* is weak and irritable, will have catarrh or inflammation of the lungs; others, whose *muscular fibres* are most susceptible, will be



attacked with rheumatism; those addicted to *drunkenness*, will, perhaps, be afflicted with an inflammation of the liver; and so of various other inflammatory affections. Colds, however, are by far the most frequent; which, perhaps, may be accounted for, in a great measure, from the lungs being so particularly exposed to all the varieties of atmospherical temperature.

A person not particularly liable to catarrh, would probably seldom feel ill effects from being chilled by an exposure to the cold air, if he were careful to restore the natural warmth of the body by degrees; but if, during the presence of that uncomfortable state of feeling, produced by the diminished temperature, he either suddenly comes into a warm room, or drinks of warm stimulating liquors, he will seldom escape with impunity.

It should be remembered that when any part of the body has been exposed to cold, it is liable to be much more affected by heat, than the exposure. Of this, the method of treating frozen limbs in cold countries, affords a beautiful and decisive proof. Were a frozen limb to be brought before the fire, or immersed in warm water, a violent inflammation would come on, and speedily terminate in mortification. They, therefore, rub the parts benumbed with snow, and then very gradually exposed them to a warm temperament.

Hence, it will evidently appear, that strong drinks, both before and after exposure to severe cold, must be highly dangerous; and it should always be remembered, that when the body has been chilled or much heated, it must be brought back to its natural state by degrees.

The common prudence of shunning, when heated, a torrent of cold air from the crevice of a door or window, or throwing off the clothing immediately after taking exercise, is so obvious, as not to be required to be enlarged upon. Putting on wet clothes, or lying in damp sheets, or sitting in wetted rooms, is also so well known to be injurious, that it is hardly necessary to admonish people against such obvious improprieties.

The operation of moisture in producing catarrh,

appears to act in the same way as cold, proving a sedative. The feet being most liable to receive the impressions of damp, as they are of cold, one of the most frequent causes of catarrh is getting them wet; to guard against which, is of importance to those liable to the complaint; and when a person has been exposed to the wet weather, the clothes should be changed as soon as possible, after wiping the body and extremities with a cloth wetted in spirits, to which a little table salt has been added.

The predisposing cause of catarrh are, first, original peculiarity of constitution; secondly, an acquired morbid irritability of the pulmonary system; thirdly, a morbid delicacy of frame, induced by enervating indulgences, or weakening occupations, or occasional and accidental debility. The exciting causes are those, which, when applied to the body, under a state of predisposition, excite disease into action.

It is worthy of remark, that, however predisposed to disease the constitution may be, by carefully guarding against the causes which more immediately produce it, its dreaded incursions may usually be prevented, and health may often be preserved to old age. The importance, therefore, of avoiding the exciting causes of a disease, so insidious in its nature, cannot be too strongly insisted upon, more particularly in the early periods of life, and in constitutions peculiarly obnoxious to its attacks.

Some persons are so susceptible of cold, as to be unable to endure the least change of temperature, without having a violent fit of sneezing, coughing, and other symptoms of incipient catarrh. And these will recur so frequently, and are of so temporary a nature, as to justify the expression, that they are seldom free from cold. The means of obviating this susceptibility is, by gradually and cautiously inuring the habit to the impressions of cold, by accomodating dress to season and personal feeling; and, when changes from cold to heat, or the contrary, are unavoidable, in guarding against the transition being sudden and immediate.

Nothing so much contributes to enervate the powers

of the human frame, as an excess of artificial heat.—The ruinous effect of this indulgence is, that our health and comfort are destroyed by the frequent recurrence of some one or other of those disorders which have their origin in cold. Debilitated by the perpetual stimulus of heat, we become sensible to every, even the slightest, variation of atmospherical temperature. Few, indeed, of the refinements of modern luxury are more prejudicial to health, by rendering the body susceptible of cold, than the living in rooms heated by stoves or enormous fires. Let those who have at heart the preservation of their health, and the vigor of whose frames is as yet entire, carefully avoid making this effeminate indulgence necessary to their comfort. Let them, by gradually training themselves to bear the impressions of cold, endeavor to induce that inevitable state of happiness, that will enable them to brave, with impunity, the vicissitudes of the atmosphere of our climate. It is in the power of every one to render the apartments they occupy cool and airy; and there are none, perhaps, who have it not in their power, more or less, frequently, during the day, to breathe the open air without doors. In endeavoring, however, to habituate the system to two degrees of temperature, one caution is of the most essential importance to be attended to; namely, never to remain inactive, either in the open air or cool apartments, long enough to induce a continued and unpleasant sensation of actual cold. This, in all cases, would effectually counteract the design proposed; and by frequent repetition, would, in all probability, ultimately be sufficient to injure the strongest constitution.

By attending to these precautions, those inflammatory diseases, for which cold only prepares the system, may be easily avoided.

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#### COMMON COUGH.

A cough is generally the effect of a cold, which has either been improperly treated, or entirely neglected.—When it proves obstinate there is always reason to fear



the consequences, as this shows a weak state of the lungs, and is often the forerunner of a consumption.

If the cough be violent, and the patient young and strong, with a hard quick pulse, bleeding will be proper; but in weak and relaxed habits, bleeding rather prolongs the disease. When the patient spits freely, bleeding is unnecessary, and sometimes hurtful, as it tends to lessen that discharge.

When the cough is not attended with any degree of fever, and the spittle is viscid and tough, sharp pectoral medicines are to be administered; as gum ammoniac, squills, &c. Two tablespoonfuls of the solution of gum ammoniac may be taken three or four times a day, more or less, according to the age and constitution of the patient. Squills may be given various ways: Two ounces of the vinegar, the oxmel, or the syrup, may be mixed with the same quantity of simple cinnamon water and an ounce of balsamic syrup. Two tablespoonfuls of this mixture may be taken three or four times a day.

A syrup made of equal parts of lemon juice, honey, and sugar candy, is likewise very proper in this kind of cough, a tablespoonful may be taken at pleasure.

But when the defluxion is sharp and thin, these medicines rather do hurt. In this case, gentle opiates, oils, and mucilages, are more proper. A cup of an infusion of wild poppy leaves, and marsh-mallow root, or the flowers of colt's-foot, may be taken frequently, or a teaspoonful of the paragoric elixir, may be put into the patient's drink, twice a day. Fuller's Spanish infusion is also a very proper medicine in this case, and may be taken in the quantity of a tea-cupful, three or four times a day. When a cough is occasioned by acrid humors tickling the throat and fauces, the patient should keep some soft pectoral lozenges, almost constantly in his mouth; as the pontefract liquorice cakes, barley sugar, the common balsamic lozenges, Spanish juices, &c. These blunt the acrimony of the humors, and by taking off their stimulating quality, help to appease the cough.

In obstinate coughs, proceeding from a flux of hu-



mors upon the lungs, it will often be necessary, besides expectorating medicines, to have recourse to issues, seatons, or some other drain. In this case I have often observed the most happy effects from a Burgundy pitch-plaster applied between the shoulders. I have ordered this simple remedy in the most obstinate coughs, in a great number of cases, and in many different constitutions, without ever knowing it to fail to give relief, unless where there were evident signs of an ulcer in the lungs. About the bulk of a nutmeg of Burgundy pitch may be spread thin upon a piece of soft leather, about the size of the hand, and laid between the shoulder blades. It may be taken off and wiped every three or four days, and ought to be renewed once a fortnight or three weeks. This is indeed a cheap and simple medicine, and consequently apt to be despised; but we will venture to affirm, that the whole *Materia Medica* does not afford an application more efficacious in almost every kind of cough. It has not indeed always an immediate effect; but if kept on for some time, it will succeed where most other medicines fail.

The only inconvenience attending this plaster, is the itching which it occasions, but surely this may be dispensed with, considering the advantage which the patient may expect to reap from the application; besides, when the itching becomes very uneasy, the plaster may be taken off, and the part rubbed with a dry cloth, or washed with a little warm milk and water. Some caution indeed is necessary, in discontinuing the use of such a plaster; this, however, may be done, by making it smaller by degrees, and at length quitting it altogether in a warm season.

But coughs proceed from many other causes besides defluxions upon the lungs. In these cases, the cure is not to be attempted by pectoral medicines. Thus, in a cough proceeding from a foulness and debility of the stomach, syrups, oils, mucilages, and all kinds of balsamic medicines do hurt.

The stomach cough may be known from one that is owing to a fault in the lungs, by this, that in the latter the patient coughs whenever he inspires, or draws in

his breath fully; but in the former that does not happen. The cure of this cough depends chiefly upon cleansing and strengthening the stomach; for which purpose, gentle vomits and bitter purgatives are most proper. Thus, after a vomit or two, the *sacred* tincture, as it is called, may be taken for a considerable time, in the dose of one or two tablespoonfuls twice a day, or as often as it is found necessary to keep the body gently open. People may make this tincture themselves, by infusing an ounce of *hiere piere* in an English pint of white wine, letting it stand a few days, and then straining it.

In coughs which proceed from a debility of the stomach, the peruvian bark is likewise of considerable service. It may either be chewed, taken in powder, or made into a tincture along with other stomach bitters.

A nervous cough can only be removed by a change of air, and proper exercise; to which may be added the use of gentle opiates. Instead of the saponaceous pill, the paragoric elixir, &c., which are only opium disguised, ten, fifteen, twenty or twenty-five drops of liquid laudanum, more or less, as circumstances require, may be taken at bed-time, or when the cough is most troublesome. Immersing the feet and hands in warm water will often appease the violence of a nervous cough.

When a cough is only the symptom of some other malady, it is in vain to attempt to remove it without first curing the disease from which it proceeds. Thus, when a cough is occasioned by teething, keeping the body open, scarifying the gums, or whatever facilitates the cutting of the teeth, likewise appeases the cough. In like manner, when worms occasion a cough, such medicines as remove the vermin, will generally cure the cough; as bitter purgatives, oily clysters, and such like.

Women, during the last months of pregnancy, are often greatly afflicted with a cough, which is generally relieved by bleeding, and keeping the body open. They ought to avoid all flatulent food, and to wear a loose easy dress.

A cough is not only a symptom, but is often likewise the forerunner of diseases. Thus, the gout is frequently ushered in by a very troublesome cough, which affects

the patient for some days before the coming on of the fit. This cough is generally removed by a paroxysm of the gout, which should therefore be promoted, by keeping the extremities warm, drinking warm liquors, and bathing the feet and legs frequently in luke warm water.

A remedy that has been, and is much extolled, is thus given: A piece of turpentine, about the size of a small nutmeg, rubbed up with the yolk of an egg, until it dissolves; then pour gradually on it a pint of flax-seed tea, and let the patient take a small wine glassful three times a day.

#### QUINSY—CYNANCHE TONSILLARIS.

This is a very common disease, and is often attended with much danger. It prevails in winter and spring, and is most fatal to young persons of a sanguine temperament. It consists, generally, in inflammation of the tonsillary glands, but in many cases it extends throughout the whole mucous membrane of the fauces, so as essentially to interrupt the speech, respiration, and deglutition of the patient.

*Causes.*—Omitting some part of the covering usually worn about the throat; drinking cold fluids when the body is warm; exposure to cold and damp air; standing long on cold and wet ground; sitting with wet feet, or keeping on wet clothes; and sitting in a room that has been newly plastered, or recently washed. The disease has also attacked jovial companions, who, after sitting long in a warm room, drinking hot liquors, and singing with vehemence, were so imprudent as to go abroad in the cold night air. Acrid or irritating food may likewise occasion quinsy. It may also proceed from bones, pins, or other sharp substances sticking in the throat; and from the caustic fumes of metals, as arsenic and antimony, taken in by the breath. This disease sometimes prevails as an epidemic.

*Symptoms.*—Inflammation of the throat is evident



from inspection, the parts appearing red and swollen; besides, the patient complains of pain in swallowing.—His pulse is quick and hard, with other symptoms of fever. If blood be drawn, it is generally covered with a tough coat of a whitish color, and the patient spits a viscid phlegm. As the swelling and inflammation increase, the breathing and swallowing become more difficult; the pain affects the ears; the eyes generally appear red, and the face swells. The patient is often obliged to keep himself in an erect posture, being in danger of suffocation; there is a constant nausea, or inclination to vomit; there is always more difficulty in swallowing liquids than pultaceous or soft solids, and the drink, instead of passing into the stomach, is often returned by the nose. The patient is sometimes starved at last merely from an inability to swallow any kind of food.

When the breathing is laborious, with straitness of the breast and anxiety, the danger is great. Though the pain in swallowing be very great, yet, while the patient breathes easy, there is not so much danger. An external swelling is no unfavorable symptom; but if it suddenly falls, and the disease affects the breast, the danger is very great. When quinsy is the consequence of some other disease, which has already weakened the patient, his situation is dangerous. A frothing at the mouth, with a swelled tongue, a pale, ghastly countenance, and coldness of the extremities, are fatal symptoms.

*Regimen.*—The regimen in this disease should be in all respects the same as in pleurisy, or peripneumony.—The food ought to be light, and in small quantity, and the drink plentiful, weak, and diluting, mixed with acids; although a rigid observance of the antiphlogistic regimen is the most proper.

It is highly necessary that the patient be kept easy and quiet. Violent affections of the mind, or great efforts of the body, may prove fatal. He should not even attempt to speak but in a low voice. Such a degree of warmth as to promote a constant, gentle perspiration, is proper. When the patient is in bed, his head ought to be raised a little higher than usual.



It is peculiarly necessary that the neck be kept warm: for which purpose several folds of soft flannel may be wrapt round it. That alone will often remove a slight complaint of the throat, especially if applied in due time. We cannot here omit observing the propriety of a custom which prevails among the peasants in Scotland.—When they feel any uneasiness of the throat, they wrap a stocking about it all night. So effectual is this remedy, that in many places it passes for a charm, and the stocking is applied with particular ceremonies: the custom, however, is undoubtedly a good one, and should never be neglected. When the throat has been thus wrapped up all night, it must not be exposed to the cold air through the day, but a handkerchief, or a piece of flannel, kept about it till the inflammation be removed.

The jelly of black currants is a medicine very much in esteem for complaints of the throat; it should be almost constantly kept in the mouth, and swallowed down leisurely. It may likewise be mixed in the patient's drink, or taken any other way. When it cannot be obtained, the jelly of red currants, or of mulberries, may be used in its stead.

There is no disease in which the benefit of bathing the feet and legs in lukewarm water is more apparent: that practice ought, therefore, never to be neglected. If people were careful to keep warm, to wrap up their throats with flannel, to bathe their feet and legs in warm water, and to use a spare diet, with diluting liquors, at the beginning of this disease, it would seldom proceed to a great height, or be attended with any danger; but when these precautions are neglected, and the disease becomes violent, more powerful medicines are necessary.

*Treatment.*—An inflammation of the throat being a most acute and dangerous disease, which sometimes takes off the patient very suddenly, it will be proper, as soon as the symptoms appear, to bleed in the arm, or rather in the jugular vein, and to repeat the operation if circumstances require.

The body should likewise be kept gently open. This

may either be done by giving the patient saline aperients, or small doses of aloes, rhubarb, and nitre. These may be increased according to the age of the patient, and repeated till they have the desired effect.

I have often known very good effects from a bit of *sal prunel*, or purified nitre, held in the mouth and swallowed down as it melted. This promotes the discharge of *saliva*, by which means it answers the end of a gargle, while at the same time it abates the fever, by promoting the discharge of urine.

At the commencement of inflammatory sore throat, and before the febrile symptoms have become violent, an emetic is often of great benefit, and not unfrequently checks its formation.

The throat ought likewise to be rubbed twice or thrice a day with a little of the volatile liniment. This seldom fails to produce good effects. At the same time the neck ought to be carefully covered with wool or flannel, to prevent the cold from penetrating the skin, as this application renders it very tender.

When white sloughy specks appear in the throat, the gargles advised in putrid sore throats may be used.

Some recommend the gum-guiacum as a specific in this disease. Half a drachm of the gum in powder may be made into an electuary with the rod of elderberries, or the jelly of currants, for a dose, and repeated occasionally.

Blistering upon the neck, or behind the ears, in violent inflammations of the throat, is very beneficial; and in bad cases, it will be necessary to lay a blister quite across the throat, so as to reach from one ear to the other ear. After the plasters are taken off, the parts ought to be kept discharging by the application of issue ointment, till the inflammation is gone; otherwise, upon their drying up, the patient will be in danger of a relapse.

When the patient has been treated as above, suppuration seldom happens. This, however, is sometimes the case, in spite of all endeavors to prevent it. When the inflammation and swelling continue, and it is evident that suppuration will ensue, it ought to be promoted by

drawing the steam of warm water in the throat through a funnel. Soft poultices ought likewise to be applied outwardly.

Not only the swallowing, but the breathing is often prevented by the tumor. In this case nothing can save the patient's life, but opening the *trachea* or windpipe. As that has been often done with success, no person, in such desperate circumstances, ought to hesitate a moment about the operation; but as it can only be performed by a surgeon, it is not necessary here to give any directions about it.

When difficulty of swallowing is not attended with acute pain, it is generally owing to an obstruction of the glands about the throat, and only requires that the part be kept warm, and the throat frequently gargled with something that may gently stimulate the glands, as a decoction of figs with vinegar and honey; to which may be added a little mustard, or a small quantity of spirits. But this gargle is never to be used where there are signs of inflammation. This species of *angina* has various names among the common people, as *the pap of the throat*, the falling down of the *almonds of the ears*, &c. Accordingly, to remove it, they lift the patient up by the hair of the head, and thrust their fingers under his jaws, which practices are at best useless, and often hurtful.

Those who are subject to inflammation of the throat, in order to avoid that disease, ought to live temperate. They ought likewise to beware of catching cold, and should sustain from aliment and medicines of an astringent or stimulating nature. Violent exercise is apt to occasion inflammation of the throat, especially if cold liquor be drank immediately after it, or the body suffered suddenly to cool. Those who would avoid this disease ought, therefore, after speaking aloud, singing, running, drinking warm liquor, or doing any thing that may strain the throat, or increase the circulation of the blood towards it, to take care to cool gradually, and to wrap some additional covering about their necks.

I have often known persons who had been subject to sore throats, entirely freed from that complaint by only

wearing a riband, or a bit of flannel, constantly about their necks. These may seem trifling, but they have great effect. There is danger indeed in leaving them off after persons have been accustomed to them; but surely the inconvenience of using such things for life, is not to be compared with the danger which may attend the neglect of them.

Sometimes, after an inflammation, the glands of the throat continue swollen, and become hard and callous. This complaint is not easily removed, and is often rendered dangerous by the too frequent application of stimulating and styptic medicines. The best method is to keep it warm, and to gargle it twice a-day with a decoction of figs, sharpened a little with diluted sulphuric acid.

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#### PUTRID SORE THROAT—CYNANCHE MALIGNA.

This is nothing more than a high grade of the preceding disease. Children, females, and persons of a feeble, delicate habit of body, are most liable to it. It prevails chiefly in autumn, and is most frequent after a long course of damp, sultry weather. It is readily distinguished from the inflammatory quinsy by the aphthæ or white specks which appear in the fauces.

*Symptoms.*—It begins with alternate fits of shivering and heat. The pulse is quick, but low and unequal, and generally continues so through the whole course of the disease. The patient complains greatly of weakness and oppression of the breast; his spirits are low, and he is apt to faint away when set upright; he is troubled with nausea, and often with vomiting or purging. The two latter are most common in children. The eyes appear red and watery, and the face swells. The urine is at first pale and crude; but, as the disease advances, it turns more of a yellowish color. The tongue is white, and generally moist. Upon looking into the throat, it appears swollen, and of a florid red color. Pale or ash-colored spots, however, are here and there interspersed, and sometimes one broad patch



or spot, of an irregular figure, and pale white color, surrounded with florid red, only appears. These whitish spots or sloughs cover so many ulcers.

And efflorescence, or eruption upon the neck, arms, breast, and fingers, about the second or third day, is a common symptom of this disease. When it appears, the purging and vomiting generally cease.

There is often a slight degree of delirium, and the face frequently appears bloated, and the inside of the nostrils red and inflamed. The patient complains of a disagreeable putrid smell, and his breath is very offensive.

The putrid, ulcerous sore throat may be distinguished from the inflammatory, by the vomiting and looseness with which it is generally ushered in; the foul ulcers in the throat covered with a white or livid coat; and by the excessive weakness of the patient; with other symptoms of typhus fever.

Unfavorable symptoms are, an obstinate purging, extreme weakness, dimness of sight, a livid or black color of the spots, and frequent shiverings, with a weak, fluttering pulse. If the eruption upon the skin suddenly disappears, or becomes of a livid color, with a discharge of blood from the nose or mouth, the danger is very great.

If a gentle sweat break out about the third, or fourth day, and continue with a slow, firm, and equal pulse; if the sloughs cast off in a kindly manner, and appear clean and florid at the bottom; and if the breathing is soft and free, with a lively color of the eyes, there is reason to hope for a salutary crisis.

*Treatment.*—The treatment of this disease differs essentially from that which is proper in the inflammatory form. All evacuations, as bleeding and purging, which are calculated to debilitate the patient, must be avoided. An emetic of ipecacuanha, in the beginning of the disease, followed by a dose of calomel, will always be of advantage. If the skin be hot and dry, the affusion of cold water may be resorted to as directed in scarlet fever.

If the disease be mild, the throat may be gargled with an infusion of sage and rose leaves, to a gill of

which may be added a spoonful or two of honey, and as much vinegar as will make it agreeably acid; but when the symptoms are urgent, the sloughs large and thick, and the breath very offensive, the following, or similar gargles may be used :

Take	Decoction of P. Bark, six ounces.
	Muriatic Acid, one drachm.
	Compound Tinct. of Cinnamon, half an ounce.
	Tincture of Myrrh, one ounce.

Mark a gargle ; or

Take	Honey, of Roses, one ounce.
	Barley of Water, ten ounces.
	Tincture of Myrrh, half an ounce.
	Vinegar, one ounce.

Mix, and make a gargle.

To six or seven ounces of the pectoral decoction, when boiling, add half an ounce of contrayerva root ; let it boil for some time, and afterwards strain the liquor ; to which add two ounces of white wine vinegar, an ounce of fine honey, and an ounce of the tincture of myrrh. This ought not only to be used as a gargle, but a little of it should frequently be injected with a syringe to clean the throat. This method is peculiarly necessary for children, who cannot use a gargle. No degree of force, however, is to be used to effect a separation of the sloughs ; and if after a continuation of the gargles for some time, the sloughs should not begin to separate, all that can safely be done is to touch them with a little alum, or the muriatic acid mixed with honey, and applied by means of a piece of lint, or a hair pencil.

It will be of great benefit if the patient frequently receives into his mouth, through an inverted funnel, the steams of warm vinegar, myrrh, and honey.

Blisters are very beneficial in this disease, especially when the pulse is low. They may be applied to the throat, behind the ears, or upon the back part of the neck.

Should the vomiting prove troublesome, it will be proper to give the patient two table-spoonsful of the saline mixture in a state of effervescence, and cloths wetted in tincture of opium may be applied to the pit

of the stomach. Mint tea and a little cinnamon will be very proper for the ordinary drink, especially if an equal quantity of red wine be mixed with it.

If diarrhœa should arise, every means must be adopted to put an immediate stop to it, as at all periods of this disease, diarrhœa is a very dangerous symptom.

If bleeding from the nose occur, the steam of warm vinegar may be frequently inhaled up the nostrils, and the drink be sharpened with sulphuric acid.

[The tea made of red pepper, salt and vinegar, mentioned under the head of scarlet fever, is one of the best gargles that can be used in this disease; and when the typhoid symptoms are conspicuous, a tablespoonful taken into the stomach every hour will be of great benefit.]

In case of a strangury, the belly must be fomented with warm water, emollient clysters given three or four times a-day. After the violence of the disease is over, the body should still be kept open with mild purgatives.

The regimen recommended in typhus fever is also proper in this disease. It should be mild and unirritating, but at the same time cordial and nourishing.

The quinsy, being a local disease, is generally caught by exposing the throat to a draught of cold air. I know many people, who are sure to be troubled with this complaint if they stand or sit near an open window, or continue for any length of time in a room lately washed. There is not a readier or more certain way to catch a quinsy, than sitting near an open window in a carriage, especially during the night, or when the weather is cold or damp.

The inflammatory sore throat, though it sometimes comes to a suppuration, generally yields to the method of treatment recommended in this chapter. Cases, however, occur, where the power of swallowing is lost, and the patient perishes from the mere want of sustenance. I lately saw a very ingenious invention of a young surgeon, by which a man's life was saved in a case of this kind. He fastened a funnel to the skin of an eel, opened at both ends; and, by means of a flexi-

ble probe, pushed one end down the gullet, till it entered the stomach. Afterwards, milk, broth, or whatever was deemed proper for nourishing the patient, was put into the funnel, and conveyed to the stomach. Though I mention this chiefly with a view of directing others in the like alarming situations, yet it may also serve to confirm an opinion, often avowed by the late John Hunter, and well illustrated in his own practice, that presence of mind, and a readiness or fertility of mechanical contrivance, may sometimes prove more serviceable in a critical moment, than all the resources of science.

But the most dangerous kind of quinsy, as I before observed, is that attended with typhoid fever, commonly called the malignant quinsy, or putrid ulcerous sore throat. Whenever the symptoms of this appear, I cannot too urgently advise the patient's friends to lose no time in procuring for him the best medical assistance they can obtain. The delay of an hour may be attended with irreparable injury.

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#### MUMPS.—CYNANCHE PAROTIDÆA.

The mumps is a swelling of the glands about the throat, which is occasionally observed to be epidemic in certain districts of this country. This disease generally makes its appearance in spring, and young persons of both sexes are much more liable to be attacked by it than those farther advanced in life. It is preceded by heaviness, lassitude, and a general sensation of uneasiness, which continue for several days. Stiffness, pain, and, and difficulty of motion, is then perceived about the articulation of the lower jaw. A swelling of the glands situated under the jaws, and diffused over the neck, next takes place, which sometimes increases to so enormous a magnitude, as greatly to disfigure the countenance. There is a good deal of fever, as indicated by the increased frequency of the pulse. About the fourth day from the commencement of the tumefaction, the disease is at its height. A gentle moisture



then begins to exude from the surface of the swelling, accompanied with general perspiration of the whole body, which, if it be encountered by keeping warm in bed, and drinking diluent fluids, appears to form the natural crisis of the disease, and the whole terminates favorably about the sixth day.

But if, from exposure to cold, or improper management, this natural process of the disease be interrupted, a singular translation of the morbid action takes place. The tumors about the throat suddenly subside, and are followed by swellings of the testicles in the male sex, and of the the breast in the female, accompanied with a fresh exacerbation of the fever. If the swellings of these parts be imprudently checked by exposure to cold, or if they suddenly subside, the brain is apt to become affected, occasioning convulsions, delirium, and other dreadful symptoms, which finally terminate in death.

[ When the mumps are attended with great febrile excitement, it will be necessary to bleed to the extent of reducing the pulse and moderating the fever. If the bowels are torpid, mild cathartics should be exhibited sufficiently often to keep up a regular action. ]

The patient ought to keep warm in bed, and encourage perspiration, by drinking plentifully of diluting liquors, such as mint-whey, or balm-tea, with a few drops of spirit of hartshorn. The effort of nature to resolve the tumors by exudation, should be promoted by covering the parts with soft flannel. If the swellings show a disposition to subside too early, they should be covered with blistering plasters, or rubbed with the volatile liniment.

Should the tumor, when seated in the testicles, suddenly subside, and any tendency to delirium manifest itself, the whole scrotum ought, without delay, to be enveloped in a blistering cataplasm, which is made by sprinkling a little of the powder of Spanish flies over the surface of the common poultice. By this means the disease may be arrested in the part occupied by it, and the dangerous consequences of its falling on the brain prevented.

It is an uncommon sequel of this complaint to find

sometimes one and sometimes both testicles, after the inflammation has ceased, gradually shrink in size, and finally wither wholly away. The mumps is decidedly an infectious disease, but there is rarely an instance of a person being attacked by it a second time.

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#### FALLING OF THE PALATE.

The falling down, or elongation of the palate, is attended with a sense of tickling in the fauces, and soreness at the roots of the tongue.

*Treatment.*—Avoid speaking, and gargle the throat with the astringent gargle, or, when there is little or no inflammation, apply salt and pepper by means of the handle of a spoon.

If fever accompany this affection, bleed and give cooling purgatives, using nothing but a vegetable diet.

It is sometimes necessary to cut off a portion of the palate, to relieve the distressing cough which is produced by a long continuance of the disease.

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#### INFLAMMATION OF THE SPLEEN.

When there is an inflammation of the spleen, considerable pain is felt in the left side, where the spleen is situated. By pressing the fingers on the left side, a throbbing sensation is easily discovered, and a pain is felt by the patient, extending from the side to the left shoulder, and not unfrequently through the belly. The most remarkable symptoms which attend this disease, and those which may be relied on, are puking of blood, great weakness, watchfulness, and not unfrequently the mind is much confused. This complaint, like all other inflammatory diseases, is attended with considerable fever. It is brought on by long continued fevers, and by affections of liver; and persons who have suffered much from long attacks of fever and ague, are liable to

what they term ague cakes, which are diseases of the spleen, and which are apt to terminate, without the application of proper remedies, in inflammation of the spleen. Where there is no inflammation, and the side is swelled, the disease is called chronic.

*Treatment.*—Purge well and frequently, with calomel and jalap:—see table for dose. Also, cup over the spleen; for the method of cupping, look under that head; and always, if the disease is of the chronic form, blister over the spleen in the usual manner. The *nitric acid* will also be found a valuable remedy: read affections of the liver, where you will find the acid treated on at large. A broad belt worn over the spleen, with folds of cloth to press on it, will be a good remedy: as will, also, rubbing the side daily with equal quantities of spirits of hartshorn and sweet oil.

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#### INFLAMMATION OF THE KIDNEYS.—NEPHRITIS.

Properly considered, inflammation of the kidneys appears to be of two kinds; one arising from the general causes of inflammation, and seated principally in the external membrane of the kidneys, the other occasioned by the stimulus of the gravel or stone in the pelvis or cavity of it, and the inflammation occupying the interior parts. It is the first that is here noticed; the other will be referred to under the head of Stone and Gravel.

*Causes.*—This disease may proceed from any of those causes which produce an inflammatory fever. It may likewise be occasioned by wounds or bruises of the kidneys; small stones or gravel lodging within them; by strong diuretic medicines, as spirits of turpentine, tincture of cantharides, &c. Violent motion, as hard riding or walking, especially in hot weather, or whatever drives the blood too forcibly into the kidneys, may occasion this malady. It may likewise proceed from lying

too soft, too much on the back, and involuntary contractions or spasms in the urinary vessels.

*Symptoms.*—There is a sharp pain about the region of the kidneys, with some degree of fever, and a stupor or dull pain in the thigh of the affected side. The urine is at first clear, and afterwards of a reddish color; but in the worst kind of the disease it generally continues pale, is passed with difficulty, and commonly in small quantities at a time. The patient feels great uneasiness when he endeavors to walk or sit upright. He lies with most ease on the affected side, and has generally a nausea or vomiting, resembling that which happens in the colic. [There is frequently a retraction of the testicle of the affected side. The pulse is full, hard, and frequent in the beginning of the disease, but after a day or two it generally becomes small and frequent, particularly in cases attended with much nausea and vomiting. The skin is warmer than natural, and presents a dry, parched appearance.]

This disease may be distinguished from the colic by the pain being seated farther back, and by the difficulty of passing urine, with which it is constantly attended.

*Regimen.*—Every thing of a heating or stimulating nature is to be avoided. The food must be thin and light; as panado, small broths, with mild vegetables, and the like. Emollient and thin liquors must be plentifully drank; as clear whey, or balm-tea sweetened with honey, decoctions of marshmallow root, with barley and liquorice. The patient, notwithstanding the vomiting, must constantly keep sipping small quantities of these or other diluting liquors. Nothing so safely and certainly abates the inflammation and expels the obstructing cause, as copious dilution. The patient must be kept easy, quiet, and free from cold, as long as any symptoms of inflammation remain.

*Treatment.*—Bleeding is generally necessary, especially at the beginning. Ten or twelve ounces may be let from the arm or foot with a lancet; and if the pain



and inflammation continue, the operation may be repeated in twenty-four hours, especially if the patient be of a full habit. Leeches may likewise be applied to the seat of pain, and to the hæmorrhoidal veins, as a discharge from these will greatly relieve the patient.

Clothes dipped in warm water, or bladders filled with it, must be applied as near as possible to the part affected, and renewed as they grow cool.

[ As soon after blood-letting as possible, from ten to twenty grains of calomel with an equal quantity of jalap, should be exhibited, and if they do not act in four or five hours, follow them by a full dose of castor oil.—The bowels must be kept in a soluble condition throughout the disease, by the daily administration of cathartics, as nothing will contribute more towards reducing the local inflammation than active purgation. Equal portions of calomel, aloes and jalap, made into pills, will generally fulfil this indication. Give enough to effect the object. At night, after the operation of the purgative, injections of flaxseed-tea, or warm milk and water, with a tea-spoonful of laudanum, will afford great relief. ]

The same course is to be followed where gravel or stone is lodged in the kidney; but when the gravel or stone is separated from the kidney, and lodges in the ureter,\* it will be proper, besides the fomentations, to rub the small of the back with sweet oil, and to give gentle diuretics, as juniper-water sweetened with the syrup of marsh-mallows: a tea-spoonful of the sweet spirits of nitre with a few drops of laudanum, may now and then be put in a cup of the patient's drink; or a decoction of the dried leaves of the peach tree. He ought likewise to take exercise on horseback, or in a carriage, if he be able to bear it.

When the disease is protracted beyond the seventh or eighth day, and the patient complains of a stupor

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\* The ureters are two long and slender canals, one on each side, which carry the urine from the basin of the kidneys to the bladder. They are sometimes obstructed by small pieces of gravel falling down from the kidneys, and lodging in them.

and heaviness of the part, and has frequent returns of chilliness, or shivering, there is reason to suspect that matter is forming in the kidney, and that an abscess will ensue.

When matter in the urine shows that an ulcer is already formed in the kidney, the patient must be careful to abstain from all acrid, sour, and salted provisions; and to live chiefly upon mild mucilaginous herbs and fruits, together with the broth of young animals, made with barley and common pot-herbs. His drink may be whey, and buttermilk that is not sour. The latter is by some reckoned a specific remedy in ulcers of the kidneys. To answer this character, however, it must be drank for a considerable time. Chalybeate waters have likewise been found beneficial in this disease. It must likewise be used for a considerable time, in order to produce any salutary effect.

[ *Urva Ursi* (bearberry leaves) may be employed with great advantage in cases where slight pain and soreness in the region of the kidney remain after the inflammatory symptoms have been subdued. It may be given alone or in combination with opium. Twenty or thirty grains of the powdered leaf with three grains of Dover's powder, may be taken every six hours. When the powder is objected to, an infusion may be made by pouring a pint of boiling water on one ounce of the leaves in powder; of which a wine-glassful is a dose.— This remedy is also eminently successful in cases where the inflammation has terminated in suppuration. Its use should be faithfully persevered in for some length of time. I have seen cases, which had resisted every other plan of treatment for months, yield to the *uva ursi*, when taken as directed for a few weeks.]

Those who are liable to frequent returns of inflammation, or obstructions of the kidneys, must abstain from wines, especially such as abound with tartar; and their food ought to be light and easy of digestion. They should use moderate exercise, not lie too hot, nor too much on their back, and avoid costiveness.

## INFLAMMATION OF THE BLADDER.

Inflammation of the bladder proceeds, in a great measure, from the same cause as that of the kidneys. It is known by an acute pain and tension towards the bottom of the belly, and difficulty of passing urine, with some degree of fever, a constant inclination to go to stool, and a perpetual desire to make water.

This disease must be treated on the same principles, as the one immediately preceding. The diet must be light and thin, and the drink of a cooling nature.—Bleeding is very proper at the beginning, and in robust constitutions it will often be necessary to repeat it.—The lower part of the belly should be fomented with warm water, or a decoction of mild vegetables; and purgatives and emollient clysters ought frequently to be administerered.

The patient should abstain from every thing that is of a hot, acid, and stimulating quality; and should live entirely upon broths, gruels, or mild vegetables.

A stoppage of urine may proceed from other causes besides an inflammation of the bladder; as a swelling of the hæmorrhoidal veins; hardened *feces* lodged in the *rectum*; a stone in the bladder; excrescences in the urinary passages, palsy of the bladder, hysteric affections, &c. Each of these requires a particular treatment which does not fall under our present consideration. We shall only observe, that in all of them mild and gentle applications are the safest, as strong diuretic medicines, or things of an irritating nature, generally increase the danger. I have known some persons kill themselves by introducing probes into the urinary passages, to remove, as they thought, something that obstructed the discharge of urine, and others bring on a violent inflammation of the bladder, by using strong diuretics for that purpose.

## INFLAMMATION OF THE LIVER.—HEPATITIS.

The liver is less subject to inflammation than most of the other viscera ; but when inflammation does happen, it is with difficulty removed, and often ends in suppuration or scirrhus.

*Causes.*—Besides the common causes of inflammation, we may reckon the following, viz: excessive fatness, scirrhus of the liver itself; violent shocks; from strong vomits when the liver was before unsound; any thing that suddenly cools the liver after it has been greatly heated; stones obstructing the course of the bile; drinking strong wines and spirituous liquors; using hot spicy aliment; obstinate hypochondrical affections; long-continued intermittent and remittent fevers; contusions; blows; and in five cases out of six the partial application of cold or wet when the body is heated or over fatigued with exercise.

*Symptoms.*—This disease is known by a painful tension of the right side under the false ribs, attended with some degree of fever, a sense of weight, or fulness of the part, difficulty of breathing, loathing food, great thirst, with a pale or yellowish color of the skin and eyes.

The *symptoms* here are various, according to the degree of inflammation, and likewise according to the particular part of the liver where the inflammation happens. Sometimes the pain is so inconsiderable, that inflammation is not so much as suspected; but when it happens in the upper or convex part of the liver, the pain is more acute, the pulse quicker, and the patient is often troubled with a dry cough, hiccough, and a pain extending to the shoulder, with difficulty of lying on the left side.

This disease may be distinguished from pleurisy, by the pain being less violent, and seated under the false ribs, the pulse not so hard, and by the difficulty of lying



on the left side. It may be distinguished by the degree of fever with which it is always attended.

In warm climates, this viscus is more apt to be affected with inflammation than any other part of the body, from, in all probability, the increased secretion of bile which takes place when the blood is thrown on the internal parts by exposure to cold; or from the bile becoming acrid, and thereby exciting irritation of the part.

This disease, if properly treated, is seldom mortal.—A constant hiccoughing, violent fever, and excessive thirst, are bad symptoms. If it ends in a suppuration, and the matter cannot be discharged outwardly, the danger is great. When scirrhus of the liver ensues, the patient, if he observes a proper regimen, may nevertheless live a number of years tolerably easy; but if he indulge in animal food and strong liquors, or take medicines of an acrid and irritating nature, the scirrhus will be converted into cancer, which must infallibly prove fatal.

*Regimen.*—The same regimen is to be observed in this as in other inflammatory disorders. All hot things are to be carefully avoided, and cool diluting liquors, as whey, barley-water, &c. drank freely. The food must be light and thin, and the body, as well as the mind, kept easy and quiet.

*Treatment.*—Bleeding from a large orifice is proper at the beginning of this disease, and it will often be necessary, even though the pulse should not feel hard, to repeat it. All violent purgatives are to be avoided; the body, however, must be kept gently open, and immediately after venesection, a large dose of the submuriate of mercury and colocynth may be directed; or the bowels may be kept open with the neutral salts or jalap, giving the submuriate of mercury from time to time. The side affected must be fomented in the manner directed in the foregoing diseases. Mild laxative clysters should be frequently administered, and, if

the pain should notwithstanding continue violent, a blistering plaster may be applied over the part affected.

Medicines which promote the secretion of urine have a very good effect here. For this purpose half a drachm of purified nitre, or a teaspoonful of the sweet spirits of nitre, may be taken in a cup of the patient's drink three or four times a day.

When there is an inclination to sweat, it ought to be promoted, but not by warm sudorifics. The only thing to be used for that purpose is plenty of diluting liquor drank about blood-warm. Indeed the patient in this case, as well as in all other topical inflammations, ought to drink nothing that is colder than this medium.

If the stools should be loose, and even streaked with blood, no means must be used to stop them, unless they be so frequent as to weaken the patient. Loose stools often prove critical, and carry off the disease.

Mercurial friction, should the disease resist the ordinary means, may be employed, in the proportion of a drachm of the blue ointment rubbed over and about the affected part every night until a slight degree of salivation is excited, or rather until some obvious effect in the constitution is produced; and this may be commenced at the end of the fourth or fifth day of the disease. Should the friction in this part be attended with any inconvenience, it may be applied to the groins, taking care, however, not to carry it beyond the point bordering on salivation. If the disease yields readily, a short course of medicine will be sufficient; but otherwise its use must be continued for, perhaps, five or six weeks. This remedy has latterly been very extensively and beneficially employed.

If an abscess or imposthume is found in the liver, methods should be tried to make it break and discharge itself outwardly, as fomentations, the application of poultices, or ripening cataplasms. Sometimes, indeed, the matter of an abscess comes away in the urine, and sometimes it is discharged by stool; but these are efforts of nature which no means can promote. When the abscess bursts in the cavity of the *abdomen*, death must

ensue; nor will the event be more favorable when the abscess is opened by an incision, unless in cases where the liver adheres to the *peritonæum*, so as to form a bag for the matter, and prevent it from falling into the cavity of the *abdomen*; in which case opening the abscess by a sufficiently large incision will probably save the patient's life.\*

If the disorder, in spite of all endeavors to the contrary, should end in scirrhus, the patient must be careful to regulate his diet in such a manner as not to aggravate the disease. He must not indulge in flesh, fish, strong liquors, or any highly seasoned or salted provisions; but should, for the most part, live on mild vegetables, as fruits and roots, taking gentle exercise, and drinking whey, barley-water, or butter-milk.

If the fomentations do not remove or abate the pain, recourse must be had to blisters, and the warm bath, in which the patient is to continue as long as his strength will permit. The want of a proper warm bath may be supplied by some of the portable baths, filled with warm water. The most convenient of these contrivances, which are to be had at the tin-shops, is commonly called the *slipper-bath*, from its resembling a slipper in form. A cask, or a common tub, may be used for the purpose upon an emergency, though not so commodious.

When hepatitis degenerates into a chronic state, the common mode of cure is by mercury, which is the most effectual practice. It should be given in small doses and slowly, as it promotes the secretion of bile, and excites the extreme vessels on the surface; and to increase the latter effect, it has been found useful to combine it with small portions of antimonial powder.

[The nitro-muriatic acid bath has been used with great success in chronic liver complaints. The following directions for its preparation and use are given by Dr. Johnson, who speaks of it in high terms of praise. Into a glass vessel capable of holding a pint or more of fluid, put eight ounces of water; and then pour in four

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\*I know a gentleman who had several abscesses of the liver opened, and is now a strong and healthy man, though above eighty years of age.

ounces of nitric, and the same quantity of muriatic acid. One ounce of this mixture to a gallon of water will form a bath of medium strength. The feet and legs of the patient are to be immersed in this bath at the temperature of about 96°, and kept there twenty minutes, or half an hour, just before going to bed. This should be done every night, and the same bath will remain good for five or six nights." If the bath at this strength produces no irritation of the skin, more acid must be added. Much benefit will often result from bathing the affected side with the same solution. "The internal use of the nitrous acid, also, has been found very beneficial in this affection. From two to four drachms, diluted in a large portion of some mucilaginous fluid, may be taken in the course of twenty-four hours." Considerable advantage will generally arise from pustulation of the right side with strong tartar-ointment. After the pustules are formed, they should be kept open by the occasional use of the same ointment.]

General bleeding is never necessary in chronic inflammation of the liver; but in a few instances topical bleeding by means of leeches or scarifications (cupping) may be servicable. When there is much local uneasiness, blisters may be advantageously applied. Inflammation of the stomach and bowels are usually attended with obstinate costiveness, for the removal of which no small skill and perseverance are often necessary. Sometimes a very mild medicine will operate, where a powerful one has had no effect. I have known a few spoonfuls of castor oil procure a stool, after the failure of strong gastric purges. The means, therefore, should be varied, not hastily discontinued. Where one thing does not succeed, another may be happily employed; and instances are not wanting of the efficacy even of external applications, when the best internal remedies have proved unsuccessful.



## INFLAMMATION OF THE STOMACH.—GASTRITIS.

This disease is divided into two species, viz: the phlegmonous and erysipelatous; but it is the former that is here alluded to, the latter arising, for the most part, towards the termination of other diseases, marking the certain approach to dissolution, and being unaccompanied with any marks of general inflammation, or by any burning pain in the stomach.

Inflammations of the stomach are dangerous, and require the most speedy assistance, as they frequently end in suppuration, and sometimes in mortification, which is certain death.

*Causes.*—Phlegmonous inflammation of the stomach may proceed from any of the causes which produce an inflammatory fever, as cold liquor drank while the body is warm, obstructed perspiration, or the sudden striking-in of any eruption. It may likewise proceed from acrid and stimulating substances taken into the stomach; as strong vomits or purges, corrosive poisons, and such like. When the gout has been repelled from the extremities, either by cold or improper applications, it often occasions inflammation of the stomach. Hard or indigestible substances taken into the stomach, as bones, the stones of fruit, &c., may likewise have that effect.

*Symptoms.*—It is attended with a fixed pain and burning heat in the stomach; great restlessness and anxiety; a small, quick, and hard pulse; vomiting, or at least nausea and sickness; excessive thirst; coldness of the extremities; difficulty of breathing; cold clammy sweats; and sometimes convulsions and fainting fits.—The stomach is swelled, and often feels hard to the touch. One of the most certain signs of this disease is the sense of pain, which the patient feels upon taking any kind of food or drink, especially if it be either too hot or too cold.

When the patient vomits every thing he eats or drinks,

is extremely restless, has a hiccough, with an intermitting pulse, and frequent fainting fits, the danger is very great.

*Regimen.*—All acrimonious, heating, and irritating food and drink are carefully to be avoided. The weakness of the patient may deceive the by-standers, and induce them to give him wines, spirits, or other cordials; but these never fail to increase the disease, and often occasion sudden death. The inclination to vomit may likewise impose on the attendants, and make them think a vomit necessary; but that too is almost certain death.

The food must be light, thin, cool, and easy of digestion. It must be given in small quantities, and should be neither quite cold nor too hot. Thin gruel made of barley or oatmeal, light toasted bread dissolved in boiling water, or very weak chicken broth, are the most proper. The drink should be clear whey, barley-water, water in which toasted bread has been boiled, or decoctions of emollient vegetables, as liquorice, and marsh-mallow roots, sarsaparilla or the like.

*Treatment.*—Bleeding in this disease, as in all other visceral inflammations, is the sheet anchor, and the only thing that can be depended on. When the disease proves obstinate, it will often be proper to repeat this operation several times; nor must the low state of the pulse deter us from doing so. The pulse, indeed, generally rises upon bleeding, and so long as that is the case, the operation is safe.

Frequent fomentations with lukewarm water, or a decoction of emollient vegetables, are likewise beneficial. Flannel cloths dipped in these must be applied to the region of the stomach, and removed as they grow cool. They must neither be applied too warm, nor be suffered to continue until they become quite cold, as either of these extremes would aggravate the disease.

[When the stomach will bear it, sweet oil, given in doses sufficiently large to produce purgation, should be administered every ten or twelve hours. The abstraction of blood by means of cupping-glasses, or leeches

when they can be obtained, from the pit of the stomach, will also be highly beneficial. When the pain is very great, or much inclination to vomit remains after the blister is drawn, a small portion of the cuticle should be removed, and a grain of morphia sprinkled over the abraded surface.]

The feet and legs ought likewise to be frequently bathed in lukewarm water, and warm bricks or poultices may be applied to the soles of the feet. The warm bath, if it can be conveniently used, will be of great service.

In this, and all other inflammations of the bowels, a large blister, applied over the part affected, is one of our best remedies.

The only internal medicines which we shall venture to recommend in this disease, are mild clysters.—These may be made of warm water, or thin water-gruel; and if the patient be costive, a little sweet oil, honey, or manna may be added. Clysters answer the purpose of an internal fomentation, while they keep the body open, and at the same time nourish the patient, who is often in this disease unable to retain any food upon the stomach. For these reasons they must not be neglected, as the patient's life may depend on them.

#### INFLAMMATION OF THE INTESTINES—ENTERITIS.

This, like inflammation of the stomach, is of two species, viz: the phlegmonous and erysipelatous; the first only is here noticed, as the latter is invariably symptomatic of some other disease, and is one of the most painful and dangerous diseases to which mankind are liable. It generally proceeds from the same causes as the inflammation of the stomach; to which may be added, costiveness, worms, eating unripe fruits or great quantities of nuts, drinking hard windy malt liquors, as stale bottled beer or ale, sour wine, or cider. It may likewise be occasioned by a rupture, by scirrhus tumors of the intestines, or by their opposite sides growing together.

The inflammation of the intestines is denominated

*Iliac passion, Enteritis, &c.*, according to the names of the parts affected. The treatment, however, is nearly the same, whatever part of the intestinal canal be the seat of the disease; we shall therefore omit these distinctions, lest they should perplex the reader.

The *symptoms* here are nearly the same as in the foregoing disease, only the pain, if possible, is more acute, and is situated lower in the abdomen. The vomiting is likewise more violent, and sometimes even the excrements, together with the clysters, are discharged by the mouth. The patient is continually belching up wind, and has often an obstruction of his urine.

While the pain shifts, and the vomiting only returns at certain intervals, and while the clysters pass downwards, there is ground for hope; but when the clysters and *fæces* are vomited, and the patient is exceedingly weak, with a low fluttering pulse, a pale countenance, and a disagreeable breath, there is great reason to fear the consequences will prove fatal. Clammy sweats, with a small intermitting pulse, and a total cessation of pain, are the signs of a mortification already begun, and of approaching death.

*Regimen.*—The regimen in this disease is in general the same as in inflammation of the stomach. The patient must be kept quiet, avoiding cold, and all violent passions of the mind. His food ought to be very light, and given in small quantities; his drink weak and diluting; as clear whey, barley-water, and mucilage of gum Arabic.

*Treatment.*—Bleeding in this, as well as in the inflammation of the stomach, is of the greatest importance. It should be performed as soon as the symptoms appear, and must be repeated according to the violence of the disease.

Fomentations, laxative clysters, and leeches, are by no means to be omitted. The patient's feet and legs should frequently be bathed in warm water; and cloths dipped in it applied to his belly. Bladders filled with warm water may likewise be applied to the region of



the navel, and warm bricks, or bottles filled with warm water, to the soles of the feet. The clysters may be made of barley-water, or thin gruel with salt, and softened with sweet oil or fresh butter. These may be administered every two or three hours, or oftener, if the patient continues costive.

A blistering plaster is here likewise to be applied immediately over the part where the most violent pain is. This not only relieves the pain of the bowels, but even clysters and purgative medicines, which before had no effect, will operate when the blister begins to rise.

If the disease does not yield to clysters and fomentations, recourse must be had to purgatives; but as these, by irritating the bowels, often increase their contraction, and by that means frustrate their own intention, it will be necessary sometimes to join them with opiates, which, by allaying the pain, and relaxing the spasmodic contractions of the bowels, greatly assist the operation of purgatives.

Acids have often a very happy effect in staying the vomiting, and appeasing the other violent symptoms of this disease; it will therefore be of use to sharpen the patient's drink with cream of tartar, juice of lemon, or, when these cannot be obtained, with vinegar.

But it often happens that no liquid whatever will stay on the stomach. In this case the patient must take purging pills. I have generally found the following answer very well: Take jalap in powder, and vitriolated tartar, of each half a drachm, calomel twenty grains, opium one grain, Castile soap as much as will make the mass fit for pills. Half of these must be taken at one dose, and if they do not operate in a few hours, the dose may be repeated.

[Ipecacuanha, given in small doses, so as to purge without vomiting, is decidedly the best cathartic that can be exhibited in this disease. It should be given in as large doses and as frequently repeated as the stomach will bear. When the liver is torpid, it may be united with calomel. If the irritability of the stomach be so great as to forbid the employment of ipecac., calomel

alone should be administered, and followed in six or eight hours by olive or castor oil, or magnesia, or senna tea.]

If a stool cannot be procured by any of the above means, it will be necessary to immerse the patient in warm water up to the breast. I have often seen this succeed when other means had been tried in vain. The patient must continue in the water as long as he can easily bear it without fainting, and if one immersion has not the desired effect, it may be repeated as soon as the patient's strength and spirits are recruited. It is more safe for him to go frequently into the bath than to continue too long at a time; and it is often necessary to repeat it several times before it has the desired effect.

It has sometimes happened, after all other means of procuring a stool has been tried to no purpose, that this was brought about by immersing the patient's lower extremities in cold water, or making him walk upon a wet pavement, and dashing his legs and thighs with cold water. This method, when others fail, at least merits a trial. It is, indeed, attended with some danger; but a doubtful remedy is better than none.

If the disease proceeds from a rupture, the patient must be laid with his head very low, and the intestines returned by gentle pressure with the hand. If this, with fomentations and clysters, should not succeed, recourse must be had to a surgical operation, which may give the patient relief.

Such as would avoid this excruciating and dangerous disease, must take care never to be too long without a stool. Some who have died of it, have had several pounds of hard dry *faeces* taken out of their intestines. They should likewise beware of eating too freely of sour or unripe fruits, or drinking stale windy liquors. I have known it brought on by living too much on baked fruits, which are seldom good. It likewise proceeds frequently from cold caught by wet clothes, but especially from wet feet.

## INFLAMMATION OF THE BRAIN—PHRENITIS.

This is sometimes a primary disease, but oftener a symptom only of some other malady, as the inflammatory, eruptive, or spotted fever. It is very common, however, as a primary disease in warm climates, and is most incident to persons about the prime or vigor of life. The passionate, the studious, and those whose nervous system is highly irritable are most liable to it.

*Causes.*—This disease is often occasioned by night watching, especially when joined with hard study; it may likewise proceed from hard drinking, anger, grief, or anxiety. It is often occasioned by the stoppage of usual evacuations; as the bleeding piles in men, and the customary discharges of women. Such as imprudently expose themselves to the heat of the sun, especially by sleeping without doors in a hot season, with their heads uncovered, are often suddenly seized with inflammation of the brain, so as to awake quite delirious. When repellents are imprudently used in erysipelas, inflammation of the brain is sometimes the consequence. It may likewise be occasioned by external injuries, as blows or bruises upon the head.

*Symptoms.*—The symptoms which usually precede true inflammation of the brain are, pain of the head; redness and sparkling of the eyes; violent flushing of the face; sometimes nausea and vomiting; disturbed sleep, or total want of it; great dryness of the skin; costiveness; retention of urine; ringing of the ears; and extreme sensibility of the whole nervous system.

When the inflammation is formed, the symptoms in general are similar to those of the inflammatory fever. The pulse, indeed, is often weak, irregular, and trembling: but sometimes it is hard and contracted.—When the brain itself is inflamed, the pulse is always soft and low; but when the inflammation only affects

the integuments of the brain, viz: the dura and pia matter, it is hard. A remarkable quickness of hearing is a common symptom of this disease; but that seldom continues long. Another usual symptom, is a great throbbing or pulsation in the arteries of the neck and temples. Though the tongue is often black and dry, yet the patient seldom complains of thirst; and even refuses drink. Respiration is hurried and anxious in the beginning, but becomes slow, deep and laborious in the latter stages. The mind chiefly runs upon such subjects as have before made a deep impression on it; and sometimes, from a sullen silence, the patient becomes all of a sudden quite outrageous.

A constant trembling and starting of the tendons is an unfavorable symptom, as are also suppression of urine, total want of sleep, a constant spitting, and grinding of the teeth, which last may be considered as a kind of convulsion. When phrenitis succeeds an inflammation of the lungs, of the intestines, or of the throat, it is owing to a translation of the disease from these parts to the brain, and generally proves fatal.—This shows the necessity of proper evacuations, and the danger of repellents in all inflammatory affections.

The favorable symptoms are, a free perspiration, a copious discharge of blood from the nose, the bleeding piles, and a plentiful discharge of urine, which lets fall a copious sediment. Sometimes the disease is carried off by a diarrhœa, and in women by an excessive flow of the menses.

As this disease often proves fatal in a few days, it requires the most proper and energetic treatment.—When it is prolonged or improperly treated, it sometimes ends in madness, or a kind of stupidity which continues for life.

In the cure, two things are chiefly to be attended to, viz: to lessen the quantity of blood in the brain, and to retard the circulation towards the head.

*Regimen.*—The patient ought to be kept very quiet. Company, noise, and every thing that affects the senses,



or disturbs the imagination, increases the disease.—Even too much light is hurtful; for which reason the patient's chamber ought to be a little darkened.

The patient must, as far as possible, be soothed and humored in every thing. Contradiction will ruffle his mind, and increase his malady. Even when he calls for things which are not to be obtained, or which might prove hurtful, he is not to be positively denied them, but rather put off with the promise of having them as soon as they can be procured. A little of any thing that the mind is set upon, though not quite proper, will hurt the patient less than a positive refusal. In a word, whatever he was fond of, or used to be delighted with, when in health, may here be tried; as pleasing stories, soft music, or whatever has a tendency to soothe the passions and compose the mind. Boerhaave proposes several mechanical experiments for this purpose; as the soft noise of water distilling by drops into a basin, and the patient trying to reckon them. Any uniform sound, if low, and continued, has a tendency to procure sleep, and consequently may be of service.

The aliment ought to be panado, and water gruel, or juice of lemons. The drink whey, barley-water, or decoctions of barley and tamarinds, which latter not only renders the liquor more palatable, but likewise more beneficial, as they are of an opening nature.

*Treatment.*—[Bloodletting is the only remedy that can be depended on in this disease. The blood should be drawn from a large orifice, and suffered to flow until fainting is induced. When this is neglected, other means will be of no avail. Bleeding should be continued throughout the whole course of the disease when the pulse is tense and quick.]

Bleeding from the temporal arteries greatly relieves the head; but as this operation cannot always be performed, we would recommend in its stead bleeding in the jugular veins. [Much advantage will often accrue from the application of cups to the temples.]

The hair should be cut short, or shaved off, and linen cloths wetted with vinegar and water, or ice-water, or

bags of pounded ice, kept constantly applied to the top of the head. Cold spirituous lotions, or diluted ether may also be applied to the temples and forehead.—Some practitioners, however, recommend the application of *tepid* water, in preference to the cold; it should be poured on the head by the hour. At the same time that applications are being made to the head, the feet should be frequently placed in warm water, and to assist in diminishing the determination of blood to the head, the patient should be kept as nearly in the erect posture as can conveniently be borne.

A discharge of blood from the hæmorrhoidal veins is likewise of great service, and ought by all means to be promoted. If the patient has been subject to the bleeding piles, and that discharge has been stopped, every method must be tried to restore it; as the application of leeches to the parts, sitting over the steam of warm water, sharp clysters, or suppositories made of honey, aloes, and rock-salt.

If the inflammation of the brain be occasioned by the stoppage of evacuations either natural or artificial, as the menses, issues, seatons, or the like, all means must be used to restore them as soon as possible, or to substitute others in their stead.

The patient's body must be kept open by purges; and small quantities of nitre ought frequently to be mixed with his drink. Two or three drachms, or more, if the case be dangerous, may be used in the space of twenty-four hours. [A combination of twelve grains of the nitrate of potash and half a grain of digitalis, is highly recommended in this disease. The dose may be repeated every two hours.]

The feet ought frequently to be bathed in luke-warm water, and soft poultices of bread and milk may be kept constantly applied to them.

[The next most important remedy to bloodletting, is active purgation. As soon as blood has been drawn to a sufficient extent, an active cathartic, consisting of calomel and jalap, should be administered; and if it does not operate in the usual time, an efficient portion of castor oil should be exhibited. The purgation should

be kept up at regular periods until the patient is well; taking care to employ such articles only as produce consistent passages. Calomel should form a portion of every cathartic, unless danger of salivation occurs, when sulphate of iron must be used in its stead.

The common practice of applying a blister to the crown of the head, is rather injurious than beneficial. It frequently not only adds to the inflammatory symptoms, but also increases the delirium. After inflammation is subdued, a blister applied to the back of the neck or between the shoulders, will always assist materially in eradicating the disease.]

I must again observe, that, though this species of inflammation ought to be treated nearly as other inflammatory disorders are, yet more than ordinary care should be used to keep the patient in a state of as much ease, composure, and tranquility as possible.

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## PHTHISIS, OR PULMONARY CONSUMPTION.

### (*Phthisis Pulmonalis.*)

A consumption is a wasting or decay of the whole body, from an ulcer, tubercles, or concretion of the lungs, an empyema, a nervous atrophy, or cachexy.

Young persons, between the age of fifteen and thirty, of a slender make, long neck, high shoulders, and flat breasts, are most liable to this disease.

Consumption prevails more in England than in any other part of the world, owing, perhaps, to the great use of animal food and malt liquors, the general application to sedentary employments, and the perpetual changes in the atmosphere, or variableness of the weather.

*Causes.*—It has already been observed, that an inflammation of the breast often ends in an imposthume: consequently whatever disposes people to this disease must likewise be considered as a cause of consumption.

Other diseases, by vitiating the habit, may likewise

occasion consumptions: as scurvy, scrofula, or king's-evil, the venereal disease, asthma, small-pox, measles, &c.

As this disease is seldom cured, we shall endeavor the more particularly to point out its causes, in order that people may be enabled to avoid it. These are:

Confined or unwholesome air; when this fluid is impregnated with the fumes of metals or minerals, it proves extremely hurtful to the lungs, and often corrodes the tender vessels of that necessary organ.

Violent passions, exertions, or affections of the mind; as grief, disappointment, anxiety, or close application to the study of abstruse arts or sciences.

Great evacuations; as sweating, diarrhœas, diabetes, excessive venery, the fluor-albus, over-discharge of the menstrual flux, giving suck too long, &c.

The sudden stoppage of customary evacuations; as the bleeding piles, sweating of the feet, bleeding at the nose, the menses, issues, ulcers, or eruptions of any kind.

Injuries done to the lungs, calculi, &c. I lately saw the symptoms of a phthisis occasioned by a small bone sticking in the *bronchiæ*. It was afterwards vomited along with a considerable quantity of purulent matter, and the patient, by a proper regimen and the use of the Peruvian bark, recovered.

Making a sudden transition from hot to a very cold climate, change of apparel, or whatever greatly lessens the perspiration.

Frequent and excessive debaucheries. Late watching, and drinking strong liquors, which generally go together, can hardly fail to destroy the lungs. Hence the *boon companion* generally falls a sacrifice to this disease.

Infection. Consumptions are likewise caught by sleeping with the diseased; for which reason this should be carefully avoided. It cannot be of great benefit to the sick, and must hurt those in health.

Occupations in life. Those artificers who sit much, and are constantly leaning forward, or pressing upon the stomach and breast, as cutlers, tailors, shoemakers,



and seamstresses, often die of consumptions. They likewise prove fatal to singers, and all who have occasion to make frequent and violent exertions of the lungs.

Cold. More consumptive patients date the beginning of their disorders from wet feet, damp beds, night air, wet clothes, or catching cold after the body has been heated, than from all other causes.

We shall only add, that this disease is often owing to an hereditary taint, or a scrofulous habit; in which case it is generally incurable.

*Symptoms.*—This disease generally begins with a dry cough, which often continues for some months. If a disposition to vomit after eating be excited by it, there is still greater reason to fear an approaching consumption. The patient complains of a more than usual degree of heat, a pain and oppression of the breast, especially after motion; his spittle is of a saltish taste, and sometimes mixed with blood. He is apt to be sad; his appetite is bad, and his thirst great. There is generally a quick, soft, small pulse; though sometimes the pulse is pretty full, and rather hard. These are the common symptoms of a beginning consumption.

Afterwards the patient begins to spit a greenish white, or bloody matter. His body is extenuated by the hectic fever and colliquative sweats, which mutually succeed one another, viz: the one towards night and the other in the morning. A looseness, and an excessive discharge of urine, are often troublesome symptoms at this time, and greatly weaken the patient. There is a burning heat in the palms of the hands, and the face generally flushes after eating; the fingers become remarkably small, the nails are bent inwards, and the hairs fall off.

At last the swelling of the feet and legs, the total loss of strength, the sinking of the eyes, the difficulty of swallowing, and the coldness of the extremities, show the immediate approach of death, which, however, the patient seldom believes to be so near. Such is the usual progress of this fatal disease, which, if not early checked, commonly sets all medicine at defiance.

*Regimen.*—On the first appearance of consumption, if the patient live in a large town, or any place where the air is confined, he ought immediately to quit it, and to make choice of a situation in the country, where the air is pure and free. Here he must not remain inactive, but take every day as much exercise as he can bear.

The best method of taking exercise is to ride on horseback, as this gives the body a great deal of motion without much fatigue. Such as cannot bear this kind of exercise, must make use of a carriage. A long journey, as it amuses the mind by a continual change of objects, is greatly preferable to riding the same ground over and over. Care, however, must be taken to avoid catching cold from wet clothes, damp beds, or the like. The patient ought always to finish his ride in the morning, or at least before dinner; otherwise it will oftener do harm than good.

It is a pity those who attend the sick seldom recommend riding in this disease, till the patient is either unable to bear it, or the malady has become incurable.—Patients are likewise apt to trifle with every thing that is in their own power. They cannot see how one of the common actions of life should prove a remedy in an obstinate disease, and therefore they reject it, while they greedily hunt after relief from medicine, merely because they do not understand it.

Those who have strength and courage to undertake a pretty long voyage, may expect great advantage from it. This to my knowledge has frequently cured a consumption after the patient was, to all appearance, far advanced in that disease, and where medicine had proved ineffectual. Hence it is reasonable to conclude, that if a voyage were undertaken in due time, it would seldom fail to perform a cure.\*

Such as try this method of cure ought to carry as

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\*Two things chiefly operate to prevent the benefits which would arise from sailing. The one is, that physicians seldom order it until the disease is too far advanced; and the other is, that they seldom order a voyage of sufficient length. A patient may receive no benefit by crossing the channel, who, should he cross

much fresh provisions along with them as will serve for the whole time they are at sea. As milk is not easily obtained in this situation, they ought to live upon fruits, and the broth of chickens, or other young animals which can be kept alive on board. It is scarcely necessary to add, that such voyages should be undertaken, if possible, in the mildest season, and that they ought to be towards a warmer climate.\*

[The island of Cuba, and the capes of Florida, particularly the region around St. Augustine, are resorted to by consumptive individuals during the fall and winter months, with much advantage. The southern parts of France, Spain, and Portugal, and some parts of Italy, are also highly recommended to such invalids. It is only in the beginning, however, that climate can exercise much influence over the disease. In the latter stages, a mild, salubrious, and uniform atmosphere will considerably mitigate it, and prolong the patient's life; but little expectation of a cure need be entertained.]

Wearing flannel next to the skin is indispensably necessary in all cases. A flannel shirt and drawers should be worn constantly, and changed every day or two, in order to prevent the accumulation of the matter of perspiration on the skin.]

Those who have not courage for a long voyage may travel into a more southern climate; and if they find the air of these countries agree with them, they should continue there at least till their health be confirmed.

Next to proper air and exercise, we would recommend a due attention to diet. The patient should eat nothing that is either heating or hard of digestion, and his drink must be of a soft and cooling nature. For this purpose he must keep chiefly to the use of vegetables and milk. Milk alone is of more value in this disease than the whole *materia medica*.

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the Atlantic, might be completely cured. Indeed we have reason to believe, that a voyage of this kind, if taken in due time, would seldom fail to cure a consumption.

\*Though I do not remember to have seen one instance of a genuine consumption of the lungs cured by medicine, yet I have known a West-India voyage work wonders in that dreadful disorder.

Asses' milk is commonly reckoned preferable to any other; but it cannot always be obtained; besides, it is generally taken in a very small quantity; whereas, to produce any effect, it ought to make a considerable part of the patient's diet. It is hardly to be expected, that a gill or two of asses' milk, drank in the space of twenty-four hours, should be able to produce any considerable change in the humors of an adult; and when people do not perceive its effects soon, they lose hope, and so leave it off. Hence it happens that this medicine, however valuable, very seldom performs a cure. The reason is obvious; it is commonly used too late, is taken in too small quantities, and is not duly persisted in.

I have known very extraordinary effects from asses' milk in obstinate coughs, which threatened a consumption of the lungs; and do verily believe, if used at this period, that it would seldom fail; but if it be delayed till an ulcer is formed, which is generally the case, how can it be expected to succeed?

Asses' milk ought to be drank, if possible, in its natural warmth, and, by a grown person, in the quantity of half a pint at a time. Instead of taking this quantity night and morning only, the patient ought to take it four times, or at least thrice a day, and to eat a little light bread along with it, so as to make it a kind of meal.

Should the milk happen to purge, it may be mixed with old conserve of roses. Asses' milk is usually ordered to be drank warm in bed; but as it generally throws the patient into a sweat when taken in this way, it would be better perhaps to give it after he rises.

Some extraordinary cures in consumptive cases have been performed by women's milk. Could this be obtained in sufficient quantity, we would recommend it in preference to any other. It is better if the patient can suck it from the breast, than to drink it afterwards. I knew a man who was reduced to such a degree of weakness in consumption, as not to be able to turn himself in bed. His wife was at that time giving suck, and the child happening to die, he sucked her breasts, not with a view to reap any advantage from the milk, but to make her easy. Finding himself, however, greatly benefited



by it, he continued to suck her till he became perfectly well, and is at present a strong and healthy man.

Some prefer butter-milk to any other, and it is indeed a very valuable medicine, if the stomach be able to bear it. It does not agree with every person at first; and is, therefore, often laid aside without a sufficient trial. It should at first be taken sparingly, and the quantity gradually increased, until it comes to be almost the sole food. I never knew it succeed, unless where the patient almost lived upon it.

Cows' milk is most readily obtained of any, and though it be not so easily digested as that of asses or mares, it may be rendered lighter, by adding it to an equal quantity of barley-water, or allowing it to stand for some hours, and afterwards taking off the cream.— If it should, notwithstanding, prove heavy on the stomach, a small quantity of water, with a little sugar, may be added, which will render it both more light and nourishing.\*

It is not to be wondered, that milk should for sometime disagree with a stomach that has not been accustomed to digest any thing but flesh and strong liquors, which is the case with many of those who fall into consumptions. We do not, however, advise those who have been accustomed to animal food and strong liquors, to leave them off all at once. This might be dangerous. It will be necessary for such to eat a little once a-day of the flesh of some young animal, or rather to use the broth made of chickens, veal, lamb, or such like. They ought likewise to drink a little wine made into negus, or diluted with twice or thrice its quantity of water, and to make it gradually weaker till they can leave it off altogether.

These must be used only as preparatives to a diet consisting chiefly of milk and vegetables, which the sooner the patient can be brought to bear, the better.—

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\*In Russia, it is common for consumptive persons to migrate into Tartary, where, by living wholly on a fermented preparation of mares' milk, termed *koumiss*, they very generally recover even from the last stages of this disease.

Rice and milk, or barley and milk, boiled with a little sugar, is very proper food.

Wholesome air, proper exercise, and a diet consisting chiefly of vegetables, with milk, is the only course that can be depended on in a beginning consumption. If the patient has strength and sufficient resolution to persist in this course, he will seldom be disappointed of a cure.

In a populous town of England,\* where consumptions are very common, I have frequently seen consumptive patients, who had been sent to the country with orders to ride and live upon milk and vegetables, return in a few months quite plump, and free from any complaint. This indeed was not always the case, especially when the disease was hereditary, or far advanced; but it was the only method in which success was to be expected; where it failed, I never knew medicine succeed.

[The Carragee, or Irish moss, is an excellent article of diet in all affections of the lungs. It is prepared in the following manner: Take two drachms of the moss and steep it in cold water two or three minutes; take it out, shake the water off, and boil it in a pint of new milk until it becomes of the consistence of warm jelly; then strain it, sweeten it with loaf sugar, and let it cool for use. While it is boiling, any spice which the patient may prefer, may be added to it, as mace, cloves, orange or lemon peel, or cinnamon. This article contains a great deal of nutriment in a small bulk, and is entirely devoid of any stimulating or irritating qualities. It will be perfectly digested when the stomach is incapable of managing any other diet.]

All the food and drink ought, however, to be taken in small quantities, lest an overcharge of fresh chyle should oppress the lungs, and too much accelerate the circulation of the blood.

The patient's mind ought to be kept as easy and cheerful as possible. Consumptions are often occasioned, and always aggravated, by a melancholy cast of mind;

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\*Sheffield.

for which reason, music, cheerful company, and every thing that inspires mirth, are highly beneficial. The patient ought seldom to be left alone, as brooding over his calamities is sure to make him worse.

*Medicine.*—Though the cure of this disease depends chiefly upon regimen and the patient's own endeavors, yet we shall mention a few things which may be of service in relieving some of the more violent symptoms.

In the first stage of consumption, the cough may sometimes be appeased by local and general purging and bleeding, which may be occasionally repeated; and the expectoration may be promoted by the following medicine: take fresh squills, gum ammoniac, and powdered cardamon seeds, of each a quarter of an ounce; beat them together in a mortar, and if the mass prove too hard for pills, a little of any kind of syrup may be added to it. This may be formed into pills of a moderate size, and four or five of them taken twice or thrice a-day, according as the patient's stomach will bear them.

The mixture of *ammoniacum*, or milk of gum ammoniac, as it is called, is likewise a proper medicine in this stage of the disease.

A mixture made of equal parts of lemon-juice, fine honey, and syrup of poppies, may likewise be used.—Four ounces of each of these may be simmered together in a sauce-pan, over a gentle fire, and a table-spoonful of it taken at any time when the cough is troublesome.

It is common in this stage of the disease to load the patient's stomach with oily and balsamic medicine.—These, instead of removing the cause of the disease, tend rather to increase it by heating the blood, while they pall the appetite, relax the solids, and prove every way hurtful to the patient.

Acids seems to have peculiarly good effects in this disease; they both tend to quench the patient's thirst and to cool the blood. The vegetable acids, as apples, oranges, and lemons, appear to be the most proper. I have known patients suck the juice of several lemons every day with manifest advantage, and would for this

reason recommend acid vegetables to be taken in as great quantity as the stomach will bear them.

During the first or inflammatory stage of the complaint, it will be advisable, in conformity with the antiphlogistic plan, to employ gentle laxatives, should the bowels be costive, with occasional gentle emetics.—When there is any febrile heat, with cough or pain in the chest, diaphoretics may be given, such as a small dose (one eighth of a grain) of tartarized antimony, or the powder of antimony, two or three times a-day.

For the patient's drink, we would recommend demulcent drinks; infusions of the bitter plants, as ground-ivy, the lesser centaury, camomile flowers, or water trefoil. These infusions may be drank at pleasure.—They strengthen the stomach, promote digestion, and at the same time answer all the purposes of dilution, and quench thirst much better than things that are luscious and sweet. But if the patient spit blood, he ought to use, for his ordinary drink, infusions or decoctions of the vulnerary roots and plants.

There are many other mucilaginous plants and seeds, of a healing and agglutinating nature, from which decoctions or infusions may be prepared with the same intention; as the orches, the quince-seed, coltsfoot, linseed, sarsaparilla, &c. It is not necessary to mention the different ways in which these may be prepared.—Simple infusion or boiling is all that is necessary, and the dose may be at discretion.

The confection of roses is here peculiarly proper. It may either be put into the decoction above prescribed, or eaten by itself. No benefit is to be expected from trifling doses of this medicine. I never knew it of any service, unless when three or four ounces at least were used daily for a considerable time. In this way I have seen it produce very happy effects, and would recommend it wherever there is a discharge of blood from the lungs.

When it is evident that there are vomicae or tubercles in the lungs, and the matter can neither be spit up nor carried off by absorption, the patient must endeavor to make it break inwardly, by drawing in the steams of



warm water or vinegar with his breath. When it happens to burst within the lungs, the matter may be discharged by the mouth. Sometimes, indeed, the bursting of the vomicae occasions immediate death, by suffocating the patient. When the quantity of matter is great, and the patient's strength exhausted, this is commonly the case. If the matter discharged be thick, and the cough and breathing become easier, there may be some hopes of a cure. The diet at this time ought to be light, but restorative, as chicken broths, sago gruel, or rice-milk; the drink, butter-milk or whey, sweetened with honey.

In the second, or tuberculated stage of the disease, the employment of emetics might be regularly persisted in every second or third morning; the sulphate of zinc is preferred; and the sulphate of copper is recommended by Senter, in the transactions of the college of Philadelphia, and by Adair, in the medical commentaries, in doses from seven to ten grains each, made into pills.

As detergents, balsamic of different kinds have been much used in the ulcerated stage. Balsam of Copaiva, in the dose of twenty to thirty drops, twice or thrice a-day, may be tried. Myrrh, however, is the medicine employed with the greatest success in those cases of hectic fever which are unattended by any great degree of heat or thirst, and which do not show manifest signs of inflammation. The preparation used by the late Dr. Moses Griffiths seems to be preferable to all others:

Take	Myrrh, one drachm.
	Dissolve in a mortar with
	Spirit of pimento, six drachms.
	Distilled water, six and a half drachms.
Then add,	Subcarbonate of potash, half a drachm.
	Sulphate of iron, twelve grains.
	Syrup, two drachms.

Mix, and divide into four draughts, one of which is to be taken every morning, another at bed time.

If at any time it should be thought too heating, the

spirituous water may be omitted, as the solution may be made without it; although it is doubted whether it will agree so well with the stomach in general.

[Recently, Dr. Cooper has published an article, in which he states, that he has not lost a patient in pulmonary consumption for the last twelve years, although he has treated a great number of cases within that period of time. His treatment consists in the administration of frequent doses of gum ammoniacum and sulphate of copper in combination. Four or five grains of the ammoniacum with the fourth of a grain of the sulphate of copper may be administered every thrice or four hours. Strict attention to diet is necessary during the progress of the cure.]

If the vomicæ or tubercles should discharge themselves into the cavity of the breast, between the pleura and the lungs, there is no way of getting the matter out, but by an incision, as has already been observed. As this operation must always be performed by a surgeon, it is not necessary here to describe it. We shall only add, that it is not so dreadful as people are apt to imagine, and that it is the only chance the patient in this case has for his life.

With regard to the remedies usually employed in the treatment of phthisis, Dr. Ferrier has observed that the digitalis, (fox-glove,) with the sulphate of iron, myrrh, bark, and other tonics, may be most proper in those cases of consumption which arise from scrofula; while the digitalis with opium, mucilaginous medicines, and diuretics, may be opposed to the florid consumption.

Dr. Crichton, of Petersburg, in the tuberculous or true scrofulous phthisis, has seen much benefit derived from the use of the tar fumigations.

It would serve little purpose here to recapitulate the many articles recommended by various practitioners in the treatment of pulmonary consumptions, such as fixed airs, Prussic acid, conium, fox-glove, uva ursi, &c. It does not follow that any of them have any decided influence over the disease, and are more embarrassing to the practitioner than beneficial to the patient. If con-

firmed phthisis were to be cured, it must be effected principally, if not solely, by dietetic means and change of climate.

[ A perpetual blister to the chest, or pustulation with tartar emetic ointment, together with a very spare diet, and bleeding whenever the pulse would bear it, and confinement in an equable atmosphere, have entirely cured pulmonary consumption when the disease was far advanced. This course has been very successful in the hands of several eminent physicians in this country, and offers, perhaps, as fair a prospect of success as any treatment that has been devised. Issues or stones may be substituted for the blisters in some cases ]

*A Nervous Consumption, or Atrophy*, is a wasting or decay of the whole body, without any considerable degree of fever, cough, or difficulty of breathing. It is attended with indigestion, weakness, want of appetite, &c.

Those who are of a fretful temper, who indulge in spirituous liquors, who breathe an unwholesome air, are most liable to this disease.

We would chiefly recommend, for the cure of a nervous consumption, a light and nourishing diet, plenty of exercise in a free open air, and the use of such bitters as brace and strengthen the stomach; as the Peruvian bark, gentian-root, camomile, and horehound. These may be infused in water or wine, and a glass of it drank frequently.

It will greatly assist the digestion, and promote the cure of this disease, to take, twice a-day, twenty or thirty drops of the elixir of vitriol in a glass of wine or water. The chalybeate wine is likewise an excellent medicine in this case; it strengthens the solids, and powerfully assists Nature in the preparation of good blood.

Agreeable amusements, cheerful company, and riding about, are, however, preferable to all medicines in this disease. For which reason, when the patient can afford it, we would recommend a long journey of pleasure, as the most likely means to restore his health.



What is called a *symptomatic consumption*, cannot be cured without first removing the disease by which it is occasioned. Thus when a consumption proceeds from the scrofula or king's evil, from the scurvy, the asthma, or the venereal disease, due attention must be paid to the malady from whence it arises, and the regimen and medicine directed accordingly.

When *excessive evacuations* of any kind occasion consumption, they must not only be restrained, but the patient's strength must be restored by gentle exercise, nourishing diet, and generous cordials. Young and delicate mothers often fall into consumption, by giving suck too long. As soon as they perceive their strength and appetite begin to fail, they ought immediately to wean the child, or provide another nurse, otherwise they cannot expect a cure.

Before we quit this subject, we would earnestly recommend it to all, as they wish to avoid consumptions, to take as much exercise without doors as they can, to avoid unwholesome air, and to study sobriety. Consumptions owe their present increase not a little to the fashion of sitting up late, eating hot suppers, and spending every evening over a bowl of punch, or other strong liquors. These liquors, when too freely used, not only hurt the digestion, and spoil the appetite, but set the whole constitution on fire.

In tracing the various causes of consumption, I entered into minute details, to put people more upon their guard, as the disease, when deeply seated, seldom admits of a cure. But there are plenty of persons who confidently undertake to perform cures in the most hopeless stages of the complaint, though physicians have not been so happy as to find out the art. Perhaps the only art which the others have discovered, or which they have ever studied, is the art of impudence and deception.

But to return to my former argument: as consumptions seldom admit of a cure, the utmost care should be exerted to avoid them. The best general caution I can give is to guard against catching cold, the fruitful mother of consumptions, and of many other disorders.



How this is to be done, will be more fully explained when I come to treat of colds and coughs, the source of numberless diseases, especially among the young, gay, and thoughtless part of the community, who have no fear of any ill until it overtakes them, when it is generally too late to prevent the fatal consequences.

*On the means of preventing Pulmonary Consumption.*—Human beings are so constituted that they can exist but for a short space of time without inhaling a fresh portion of atmospheric air. The uninterrupted repetition of this process, which is absolutely requisite for the support of life, implies a perpetual state of activity in the organs by means of which it is carried on. This alternate state of dilatation and contradiction of the lungs necessarily forms a great impediment to the cure of any wound or ulceration taking place in their substance, by the same process employed by nature to heal injuries in other parts of the living body, which admit of a temporary state of quietude and repose. The slightest degree of diseased action occurring in an organ so essentially important to the maintenance of existence, is sufficient to create alarm, which our melancholy experience of the inefficacy of the art of medicine to remove chronic affections of the organs of respiration has no tendency to diminish. A single opportunity of inspecting the state of the lungs of a person dead of pulmonary consumption, might, I have frequently thought, suffice to correct the pretensions of those who propose to cure the disease after it is confirmed, by the administration of medicine. But the impracticability of a cure ought to render us proportionally more attentive to the means of prevention, from which much may be expected, provided they employed at a sufficiently early period.

Pulmonary consumption may be divided into two kinds, which it is of importance, even in a prophylactic point of view, to discriminate from each other.—The lungs may be injured by a blow, or pierced by a wound. Inflammation may take place in them from over-exertion, in consequence of the stoppage of some custo-

mary evacuation, or from exposure to cold, giving rise to pleurisy or peripneumony; and these diseases may terminate in consumption in persons who have no natural predisposition to that complaint. This species of the disease may be termed symptomatic, and occasionally admits of being cured, by removing the cause from whence it originated. Sometimes, when an abscess is formed in the lungs, which is termed a vomica, and produces all the symptoms of phthisis, it will at length either break internally, when the matter is coughed up, or point externally, and admit of being opened; and, after its contents are evacuated, it will heal up, and the patient completely recover.

The other species of consumption may be denominated hereditary, as being derived either from a parent, or occasionally from some more distant relative. As we perceive children to resemble their parents in the features of their face, and in the disposition of their minds, so there can be no doubt but they also resemble them in the internal organization of the body, on the peculiar structure of which a predisposition to future disease must necessarily depend; and that children are, in fact, liable to the diseases of their parents, we have manifold and decisive proofs. How frequently do we see a person, at a certain time of life, so much resemble what a father was at the same period, that he seems to fill the identical place in society that the former occupied. In like manner, at certain periods of life, do children become liable to the diseases of their parents, and consumption, gout, or dropsy makes its appearance, the germs of which must have lain in the system from the earliest period of existence, although they did not disclose themselves till their due season. Not only do we see that children are peculiarly prone to the diseases of that parent to whom they bear the greatest personal similarity, but as we occasionally perceive the resemblance of some more remote ancestor break forth, as it were, in a family, so we shall find the constitution and diseases of that child differ from those of its immediate parents, and partake rather of the nature of the progenitor whom it most resembles.

These circumstances are thus particularly noted, because it is only in cases where the predisposition to this disease is suspected at a very early period of life, that the means of prevention can be employed with any reasonable prospect of success. For the same reason; also, I am desirous of attracting the attention to a point of similarity between parents and children which has not hitherto been sufficiently attended to. The form and structure of the nails of both extremities afford an excellent criterion to enable us to judge which of the parents the offspring most resembles in constitution. I have known the peculiar structure of a toe-nail designate certain individuals of a family for several successive generations. Although these parts of the human body do not make their appearance earlier than about the sixth month of the foetal age, they indicate very decidedly the predominant influence of the parent whom the child most resembles in constitution. It is also a curious fact that the horns of animals, which often do not appear till several months after birth, afford the best criterion for distinguishing the peculiar breed or race, to those who are conversant with such subjects.

But certain peculiarities in the structure of the nails afford also a strong indication of the propensity to phthisis. In forming an opinion concerning the probable future occurrence of this disease, the nails ought always to be carefully examined, and compared with those of the parents. If these parts of the body are large, of an oblong shape, of a smooth texture, and a pink color, curling over the tips of the fingers, the last joint of which is commonly somewhat enlarged, there is much reason to suspect a phthisical tendency. If, moreover, we find a slender conformation of the body, fine skin and hair, a shrill voice easily rendered hoarse, hollowness of the temples, sound teeth, and an expanded pupil of the eye, there is little doubt but a person so constituted will, at some future period of life, become the victim of pulmonary consumption.

The aggregate of these appearances constitute what is termed delicacy of constitution. This habit of body is frequently accompanied by superior powers of mind.



Individuals, indeed, who seem almost to approach the perfection of our species, are peculiarly marked as the victims of pulmonary consumptions. This fact not only furnishes a strong motive for endeavoring to prevent the first attack of affections of the lungs, but affords also some grounds to encourage the expectation of success. Soundness of teeth, a marked concomitant of the phthisical habit, is commonly considered as one of the surest signs of a sound constitution. A variety of examples might also be adduced of persons who, after having subdued, by regimen and medicine, phthisical symptoms with which they were threatened in their youth, have protracted existence to a very advanced period of life. As the propensity to this disease must necessarily be the result of a certain combination of habits, continued, perhaps, from one generation to another, combined with the peculiar circumstances in which the individual is placed, it is reasonable to suppose that, by altering the former, and counteracting the latter, the general constitution might be changed.

Pulmonary consumption is a disease almost peculiar to a certain zone of northern latitude, in which the British Isles are included. A little farther to the north, or to the south, the ravages of these complaints are comparatively trifling. The only natural cause to which this can with propriety be attributed, is the fluctuation of our atmospheric temperature between the confines of heat and cold. The increased frequency of pulmonic complaints, which has accompanied the more general diffusion of wealth, and consequent habits of luxurious living in this country, affords, I think, sufficient proof that tender and indulgent treatment is not the best means of obviating them. What are the classes of mankind most susceptible of, and most injured by the impressions of heat and cold? Precisely those who are least exposed to their influence. Sedentary artificers, who necessarily pass their days in close and heated chambers, are swept off in unaccountable numbers by pulmonary consumption; while sailors, ploughmen, butchers, and all persons whose occupations lead them to be much in the open air, enjoy a comparative



immunity from the attack of this disease. Among the native inhabitants of America, Doctor Rush informs us, that pulmonary consumption is unknown; but in proportion as they adopt the arts and manners of civilized life, do they become liable to the fatal influence of this complaint.

When a wealthy parent sees a delicate child shiver at the freshness of the breeze, a natural tenderness leads him to avert this unpleasant feeling by the means he can most readily command, close apartments and warm clothing. But he thus augments that very delicacy of constitution he should endeavor to counteract. The variations of atmospheric temperature are most sensibly felt by those who are cased in the thickest clothing; as plants reared in the hot-house are least able to bear the blasts of winter. Contrast the leaden-colored visage, and the chilblain toes and fingers of the puny school-boy, shivering and crawling along the street in a winter's day, with the appearance of the country lad of equal years employed all day in following the plough; the surface of his body, in place of being chilled by the cold, is roused to a state of increased vascular action, his countenance glows with the genuine hue of health, and his whole frame bespeaks elasticity and vigor.

Surely from this example we might be taught the most effectual method of averting delicacy of constitution, being careful to modify the means according to the object we have to operate upon. Let the child whose wealth can command, and whose future existence is of sufficient importance to justify such attention, reside in a part of the country where the soil is chalk or limestone, and the air pure. Let him be abroad all day, and during every kind of weather, provided he is employed in active exercise; let him be guarded against suddenly approaching, or sitting much over the fire, even in winter. Let the habit of retiring early to bed, and leaving it early in the morning be strictly enforced.—Let him wear no more clothes than are requisite to guard against cold, and plunge into the sea, or a river, daily, during the three warmest months of summer.—

The phthisical habit is, in general, attended by a precocity of intellect, which it is of more importance to check than to encourage. In such instances the improvement of the mind should be considered as a secondary object, and may well be postponed till a certain share of robustness of constitution has been ensured. This kind of corporeal education is obviously incompatible with the usual discipline of schools, whether private or public, and can only be advisable where the importance of the object justifies the various sacrifices that must be made in order to attain it.

I very recently had occasion to see the success of this plan completely exemplified. Every possible attention was paid to the health of a delicate child by its anxious parents. He lived in spacious apartments in an open and airy part of London; was carried abroad several times every day when it did not rain: and the diet was regulated with every attention to propriety.—Notwithstanding all this care the flesh of the child was flabby, he was averse to exercise, the belly became prominent, and the glands on each side of the neck were very considerably enlarged. In this state the child was removed the beginning of last summer to a dry and healthy situation in the neighborhood of the sea. There it ran about and bathed along with other children of a similar age. No particular attention was paid to dress or diet. In the course of a few months the tumid abdomen subsided, the swellings of the neck disappeared, the flesh became firm, and this child, whose life had been despaired of, and was sent from home as on a forlorn hope, returned vigorous, active and healthy.

But precautions against this insidious disease are rarely had recourse to at so early a period of life. The buoyant spirits and active propensities of its destined victims rarely excite suspicion either in themselves or their friends of the approaching mischief. As the age of puberty approaches, other indications of the propensity to phthisis are developed. The narrow and elongated form of the chest becomes more apparent, and is chiefly indicated by the prominence of the shoulders, which stand out from it on each side somewhat like

wings. A broad deep chest, the transverse section of which approaches the circle, affords the best criterion of a healthy and vigorous conformation of the body, not only in man, but in all kinds of quadrupeds which are subservient to his wants. For the support of life it is necessary that nearly one-half of the blood should circulate through the lungs in the same time that the remainder passes through the rest of the body. But if the lungs are prevented from expanding to their proper magnitude in consequence of being confined within the limits of a narrow thorax, their proper blood-vessels must be proportionably diminished in number as well as dimensions, and on any sudden push of blood, their coats, already over-distended, must be prone to rupture. At this period of life, too, there is evidently an effort of the constitution endeavoring to expand every part to a state of full perfection. This is evinced by frequent discharges of blood from the nose. The vessels of that part readily heal, but an accident of the same kind taking place in the lungs, not unfrequently lays the foundation of consumption.

This temporary fullness of blood should be counteracted, by strictly adhering to a diet of the farinacea and ripe fruits. Animal food and fermented liquors ought to be rigidly prohibited. Even milk often proves too nutritious. Exercise should be regular but gentle. Sudden and violent exertions are extremely hazardous.—Riding on horseback is preferable to any other kind of exercise. Such efforts of the voice as are required in singing or playing on any wind-instrument of music, frequently produce discharges of blood from the lungs; but the practice of reading and reciting for some time together in a moderate tone of voice, tends to strengthen these organs, and to diminish the danger of pulmonary hemorrhage from any sudden exertion.

During the circulation of the blood through the lungs, a principle necessary to the support of life is absorbed from the air; and various matters, the longer continuance of which in the body would prove noxious, are also discharged in the form of vapor or gas. That there is, besides, no inconsiderable quantity of aqueous



fluid secreted and discharged from the lungs, every person must be convinced, who has attended to the deposition of watery particles that takes place from the breath in a frosty day. Of the whole quantity of perspirable matter discharged from the surface of the body in any given portion of time, that exhaled from the surface of the lungs may be estimated as amounting to one-third. The skin and the lungs being both secreting surfaces must also be considered as organs mutually compensating or balancing each other. If the skin be suddenly chilled, a larger share of perspirable matter will endeavor to escape by the lungs, as being an internal, and therefore a warmer surface. It is not surprising that this effort should in a delicate organ be productive of derangement and disease, and accordingly we daily hear people dating their first attack of pulmonary complaints from sitting in a cold place after having been overheated, from being thoroughly soaked with rain, or from cold-bathing in an improper state of the system.

The purpose of these observations is to enforce the propriety of maintaining cutaneous perspiration, and endeavoring to render the surface of the body less susceptible of atmospheric variations. In persons of a phthysical habit the skin is in general either dry and scabrous, or clammy, both of which conditions betoken deficient perspiration. The most efficient means of removing this morbid state of the surface of the body is the sedulous use of cutaneous friction. Why a practice, on which the ancient physicians placed so much dependence not only for the cure of many diseases, but in a pre-eminent manner for the preservation of health, should have in modern times fallen so much into neglect, it is not perhaps easy to account; although at present nothing seems to be considered as medicine except what is taken into the stomach; as if the due regulation of air and exercise did not furnish means of recovery, at least as efficacious as drugs.

Cutaneous friction is most advantageously performed by means of a flesh-brush. To be of any essential use, this instrument ought to be of a much harder texture than those commonly offered for sale. The most favor-



able season for this practice is not immediately on getting out of bed. There exists a sensibility of the skin at that time which renders the application of the brush painful and unpleasant. After the customary diurnal evacuations of the bowels has taken place, the person should strip, and applying this instrument to various parts of the body in succession, commencing with the chest; continue the friction till an universal redness and glow takes place over the whole surface of the body.—The temporary exposure of the naked body to the air of the chamber during this operation, accustoms the skin to a certain variety of temperature, while any danger of taking cold is completely obviated by the exercise, as a person ought always, if his strength permit, to rub himself. Though somewhat painful and irksome at first, this operation, like all the rest of our active habits, generally becomes pleasant, and at length necessary, so that a person accustomed to it feels himself uncomfortable if he has omitted for a day his usual exercise.

From regularly persevering for some length of time in this practice I have observed a very obvious alteration produced in the texture of the skin. It appears to acquire thickness, and to become mellow and pliable, a condition very different from that of persons disposed to phthisis, whose skin is commonly thin and harsh. The muscles also seem to derive firmness from this practice. The brush will also be found daily to remove no small quantity of furfuraceous matter, which, whether it be insipissated perspiration adhering to the surface or particles of decaying cuticle, is certainly better away.—This practice also removes every kind of roughness and asperity from the surface of the skin, which becomes beautifully smooth and polished, so that even as a cosmetic, having no tendency to impair health, cutaneous friction may be advantageously employed. After exposure to wet, to strip and rub the surface of the body till it glows, is unquestionably the best means to prevent taking cold.

I do not presume so strenuously to recommend friction of the skin as a means of supporting the healthy action of the external surface of the body, and of promo-

ting cutaneous perspiration, without having witnessed remarkable changes for the better, produced in the constitution by adopting and persevering in this practice.— Indeed I am disposed to attribute much of the benefit derived from exercise on horseback, as well as the good effects of a sea voyage towards a mild climate, to the increase of perspiration produced by these modes of gestation.

Every person suspicious of predisposition to pulmonary consumption ought at all times, but especially in cold weather, to wear a quantity of woollen clothing sufficient to obviate any approach to the perception of chilliness; independently however of the actual presence of obstinate hoarseness or cough, I am disposed to think that the requisite quantity of flannel is more advantageously worn over the usual shirt, than in immediate contact with the skin.

The possibility of communicating this disease by contagion is a point that has been much agitated. As a measure of precaution, the delicate ought to decide this question for themselves in the affirmative. Exhalation from the lungs is the mode by which infectious diseases are most generally propagated; and from analogy we might infer that air impregnated with the effluvia of these organs in a state of ulceration, would have a tendency to excite diseased action of a similar kind if received into the lungs of a person previously disposed to this complaint. I have seen more than one instance of a husband who appeared to have no previous disposition to consumption, being affected with a distressing cough, which continued to harrass him for months while his wife was lingering under that disease. On one melancholy occasion I witnessed the successive deaths of three young ladies, two of whom, in my opinion, decidedly caught the disease in consequence of their sedulous attention, during the progress of the indisposition, to her who was first affected, who evidently was of phthisical habit, which was not apparent in either of the others.

If the presence of the symptoms which have been already described as characterising this disease renders

its existence no longer equivocal, the person so affected ought without delay to migrate towards a warmer climate. Should circumstances render this expedient impracticable, the next best plan a phthisical person can adopt is to remove into a low and rather damp situation. The fatal event of pulmonary consumption is uniformly accelerated by residing in an elevated region. There are even instances on record of phthisis making its appearance in families, previously unaffected by it, on changing their place of residence from a level to a hilly country. In Holland, pulmonary consumption is a disease of comparatively rare occurrence. The same situations that predispose to ague are unfavorable to the attack of phthisis, as if these two states of the constitution were incompatible with each other. The physicians of ancient Rome were accustomed to send their consumptive patients to the low and marshy land of Egypt. Cicero, the celebrated orator, who, in his youth, was threatened with consumption, as the hollow temples and sharp features of his remaining busts abundantly testify, travelled into Egypt for the recovery of his health.

In the incipient stages of phthisis pulmonalis the dry vomit taken in a morning, fasting, I have known occasionally to be of use. Keeping up a copious discharge from the surface of the chest by the savin ointment subsequent to the application of a blistering plaster sometimes appears to arrest the progress of the disease.

When symptoms of incipient phthisis have been accompanied by tumors commencing at the clavicle and extending upwards towards the ear, I have seen much benefit from the administration of calomel combined with steel.

When recovery is despaired of, a diet consisting of buttermilk and the lighter farinacea, prolongs existence, and mitigates the distress of the cough more effectually than the use of the opium. From a medicine, which of late years has been much extolled, as diminishing the frequency of the pulse, (*digitalis*,) I am sorry to say, I have seen no permanent benefit produced in this disease; and notwithstanding the boast of empiricism,



a remedy that will heal ulceration or resolve tubercles, I believe yet remains to be discovered.

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## HEAD ACHE.

If a foul stomach be the cause, give an emetic; after which, take Columbo three times a day. If from a plethoric habit, which is known by a heaviness of the head and flushed face, bleed and give opening medicines. If from rheumatism, apply a blister to the back part of the neck, or between the shoulders; and, at bed-time, bathe the feet in warm water, and take the anodyne sudorific draught. (*See Dispensatory.*) If from a weak habit, and where the pain returns at stated periods, as in cases of intermittents, and is confined to one side of the head, as over an eye, the cure will generally depend upon the free use of bark and snake root, or the solution of arsenic, twice or thrice a day; which seldom fails, especially if preceded by a brisk purge. In this, as well as other periodical pains, laudanum exhibited in a pretty large dose an hour or two before the expected fit, will often prevent its coming on. Ether externally applied over the pain on a piece of linen, with a warm band to confine it, will afford immediate relief in head-aches attended with cold skin.—Cayenne pepper mixed with snuff, by irritating the membranes of the nostrils, has also given much relief in cold or nervous head-aches.

It is not unfrequent that the partial or nervous head-ache, as it is termed, is produced from a decayed tooth, which, on discovery, should instantly be extracted.

Symptomatic head-ache is a disease of so many organs, that it is difficult to ascertain the organ primarily affected. But when the real nature of the complaint is ascertained, the practice to be pursued will, of course, be obvious. Where the causes are beyond our reach, the disease may be mitigated at least by some of the remedies we have pointed out, such as paying attention to the state of the bowels, blistering, and keeping up a determination to the surface.



The sympathy between the head and stomach has been already noticed. It is the subject of such constant experience, that to enlarge on it would be superfluous. Head-ache attends fever of almost every kind. Every obstruction in the bowels; every accumulation of sordes, or indigestible matter in the stomach, produces the same disease; every obstruction to the regular evacuation of any gland, particularly those of the surface; every nervous affection, either from excessive excitability or exhaustion, has a similar consequence.

Repelled fluids from the surface produce very constantly a symptomatic head-ache. A cause of this kind is the repulsion of acrid matter from the surface, by the application of astringent washes to the cutaneous affections; by saturnine or mercurial applications as cosmetics, from which the head generally suffers, though the mischief is often more extensive, and apoplexy or epileptic fits the frequent consequences. Repelled gout is a still more serious cause.

We have not mentioned the mental causes, anxiety, fear, suspense, and grief; for these seldöm produce the complaint until the body, or, in general, the stomach is affected. The head-ache of students is often merely a nervous affection. Whatever be the action of the nervous fibres in intellectual operations, its excess is often a cause of pain; though in many instances the head-ache of students is connected with obstructions in the bowels, and very often with increased determination to the head. The hysteric head-ache partakes of this nervous cause, particularly when the pain feels as if a nail were fixed in the brain. Are we then to be surprised at its frequent occurrence? Is it not wonderful that the head is ever free from pain?

In the nervous head-ache, which occurs more frequently than is generally suspected, I have found no remedy so effectual as genuine wine. It may be given during the paroxysm, to persons unaccustomed to it, from a half pint to a quart, without producing any other than the pleasing effect of mitigating the pain.—It is also the best preventive of all nervous diseases,

when used regularly and in moderation. (*see Vine, Materia Medica.*)

When head-ache is accompanied with coldness of the extremities, bathing the feet in warm water, rubbing them with flour of mustard or tincture of Cayenne pepper, and keeping up a general circulation to the surface by flannel next the skin, will often afford immediate relief. And in cases of great determination to the forehead, as indicated by a flushed face and preternatural heat, the application of cloths wrung out of cold vinegar and water to the head and temples will be attended with good effects.

Those subject to this complaint, should bathe their head every morning in cold water, avoid full meals, lie with their head high in bed; and always keep their feet warm, and the bowels in a regular state.

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#### EAR ACHE,

Is frequently produced by living insects getting into the ear. The most effectual way to destroy them, is to blow in the smoke of tobacco, or pour in warm sweet oil. If occasioned by cold, inject warm milk and water in the ear, or drop in a little laudanum or volatile liniment. If this produce not the desired effect, foment the ear with steam of warm water, and apply a bag of camomile flowers, infused in boiling water, and laid on often, as warm as can be borne.

A fomentation may be applied to the ear by baking a hoe-cake, as it is called, of corn bread, with salt in it, and after taking off one side of the crust, put a piece of cloth round it, and apply it to the side affected; this may be more easily obtained than camomile flowers.

When the inflammation cannot be removed, a poultice of bread and milk, or roasted onions may be applied to the ear, and frequently renewed till the abscess breaks; after which, it must be syringed twice or thrice a day, with Castile soap and water. In this complaint, a blister behind the ear is highly useful.

## DEAFNESS

Is occasioned by any thing injurious to the ear, as loud noise from the firing of cannons, violent colds, inflammation or ulceration of the membrane, hard wax, or by debility or paralysis of the auditory nerves. It also frequently ensues in consequence of long protracted fever.

*Treatment.*—It is difficult to remove deafness, but when it is owing to a debility of some part of the organ, or arises in consequence of some nervous affection, stimulants dropped into the ear, often prove salutary

Ether dropped into the ear, seems to possess a two-fold effect, one of dissolving the indurated wax, and the other of stimulating the torpid organ; but it is liable to excite some degree of pain, unless it be freed from the sulphuric acid. No prescription for deafness from indurated wax ever acted more surprisingly—none, I am sure, more agreeable to my feelings, than the following, says Dr. Ewell: In consequence of a violent attack of bilious fever, which degenerated into the nervous, my honorable friend, Colonel George M. Troup, of Georgia, was afflicted with a deafness for a year or two, so entire, that, in Congress, when the members were on the floor, he was obliged to place himself close to the orator, and even then, frequently failed of the pleasure and profit of hearing his reasonings. Suspecting indurated wax to be the cause of his deafness, I directed the cavities of both ears to be well syringed with warm and strong suds of Castile soap. This was done twice a day, the ears constantly filled in the interim with pellets of wool dipped in strong camphorated liniment, and sometimes plugs of camphor. In a few weeks, the nerves of hearing received their sensibility, and, as the Colonel himself thought, more acutely, if possible, than before.

Salt water is a better menstrum for the wax, and may be employed, or some of the table salt finely powdered,

may be dropped in the ear. There is reason, however, for apprehending one bad effect from this remedy; namely: giving such a susceptibility to the organ, that it is more liable in future to be affected by cold, and, therefore, this remedy must be employed with caution.

Deafness, in old people, is sometimes attended with noise in the ears, and is then generally owing to debility. Every evacuation increases it, and warm tonics, with a generous diet, are the best remedies.

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### TOOTH ACHE

Is best removed by extracting the tooth; but if this cannot be effected, fill the cavity with a little lint dipped in the tooth-ache drops, Turlington's balsam, or any of the essential oils, or with pills of camphor and opium.

The nerve may sometimes be destroyed by a hot iron or knitting needle. A carious tooth is sometimes pained by accidental colds, and in such cases it might not be prudent to have it extracted. If the external aperture be smaller than the carious cavity, after clearing away the carious matter, the access of air may be impeded by stuffing of gold or silver leaf. When the nerve is accustomed to the external air, it will continue carious for many years without pain, and be truly useful.

When tooth-ache is connected with rheumatism or gout, which sometimes happens, the remedies of either should be employed.

This unpitied, though excruciating pain, is, in most cases, no more than the just punishment of our neglect of the teeth. Surely, then, we ought to take some care of them, though it were but for the pleasure of having them sound. But this care would be redoubled, were we but daily to consider the advantage of good and clean teeth and sweet breath. Some women, indeed, are blessed with faces so nearly angelic, that not the blackest teeth can entirely defeat their charms, nor the vilest breath drive away their lovers. But how different would be the effect of both, if, through their ruby lips, opened with a smile, we were to see teeth of ivory,



**Damaged Pages:**

**p. 339-340**



white as snow, pure as the *fair owner's fame*, and accompanied with breath as sweet as that of infancy.

*Prevention.*—To prevent the tooth-ache, and to preserve the teeth and breath perfectly sound and sweet, the tooth-brush, dipped in warm water, and in the charcoal tooth-powder, (*see Dispensatory*), should be used constantly every morning. The charcoal powder, an invention of the celebrated Darwin, is good for whitening the teeth, and admirable in correcting bad breath. The tooth-pick and tumbler of pure water should never be forgotten after every meal.

If the calcareous crust or tartar upon the teeth adhere firmly, a fine powder of pumice stone may be used occasionally. When the gums are spongy, they should be frequently pricked with a lancet, and gently rubbed with a powder composed of equal parts of Peruvian bark and charcoal.

When the gums are so spongy that they bleed, and more particularly when the gums have been made so by the imprudent use of calceolins, equal parts of the tincture of *kino* and tincture of myrrh may be rubbed on the gums twice or thrice a day.

Young persons, who wish to carry their strength with them through life, must take care never to sip their tea scalding hot, nor drink water freezing cold. Such extremes not only injure the tender coats of the stomach, but often ruin the teeth, and have caused many imprudent persons to pass a sleepless night, distracted with pains of the teeth and jaws.

## RHEUMATISM.

*Symptoms.*—Wandering pains in the larger joints, and in the course of the muscles connected with them increased on motion, and generally worse towards night. When with fever, it is called acute or inflammatory rheumatism; and, without, chronic.

*Causes.*—Sudden changes of weather; applica

of cold to the body when over-heated; wearing of wet clothes.

*Treatment.*—In the inflammatory rheumatism, large and repeated bleedings are necessary, as indicated by the fullness of the pulse, especially on the first days, and when there is much pain. With this should be combined a free use of diluent drinks, as flax-seed or balm tea, barley or rice water, with a little nitre dissolved in each draught, or the antimonial powders, or mixture in small doses, to excite slight perspiration, which should be kept up with great care, as in this relaxed state of the disease is liable to recur upon the least application of cold.

When the disease, a very essential discharge is the perspiration. If this be not produced, every medicine should be observed. Of the Diaphoretics, Dover's powder is best adapted to this complaint; and it should be intermitted, as sweating is once begun, it should not be repeated very gradually.

The foxglove, when it has relieved, should be sufficient. The drops every four hours, in small doses from ten to twenty drops, of considerable efficacy, particularly when an objection is made to the free use of the blood root, (see *Materia Medica*,) is also a valuable auxiliary in this disease.

Bleeding and blistering over the part where the pain and inflammation continue violent, when wisely their good effects.

After the inflammatory symptoms have in a measure subsided, the anodyne sudorific draught or tincture, (see *Dispensatory*,) or laudanum alone, may be administered at bed-time, with great advantage.

During this general treatment, attention must be paid to the state of the bowels, which should be kept open by emollient clysters or cooling medicines, as the cathartic mixture, or castor oil, exhibited in small and repeated doses.

When the disease has fully attained its chronic state, it then forms a local affection, distinguished merely by



stiffness, distention, and considerable immobility in the joint,

In this species of the disease, a different plan of cure must be followed. Large evacuations are to be avoided, and external stimulants of the warmest kind should be applied, as the oil of tar,\* oil of sassafras, spirits of turpentine, or the tincture of red pepper and mustard, and, along with this, friction with a flesh brush or flannel over the afflicted joint is not to be omitted. If these means prove ineffectual to rouse the energy of the part, add to an ounce or two of either of the above articles, one or two drachms of the tincture of Spanish flies. In addition to these remedies, the internal use of the rheumatic tincture, (*see Dispensatory*,) in doses of a table-spoonful, twice or thrice a day in a cup of tea, is much to be depended upon.

When these remedies prove ineffectual, we may suspect that some peculiar fault exists in the habit, which must be corrected before a cure can be expected. If the patient be much debilitated, or of a scorbutic habit, give him the nitric acid diluted, or bark freely. And if the disease be in consequence of venereal taint, or taking cold from the use of mercury, let him take calomel in small doses, or one of the mercurial pills night and morning until a ptyalism be produced. A strong decoction of sarsaparilla (*see Materia Medica*) is also a useful auxiliary, and sometimes a remedy of itself.

In some cases of obstinate rheumatism, I have witnessed the happy effects from taking, for some time, a tea-spoonful of flour of sulphur night and morning, in milk or spirits and water. In others, again, I found nothing equal to the pokeberry bounce, (*see Materia Medica*,) in doses of a wine glassful, morning, noon, and night.

The cuckoo pint, or wake robin, (*see Materia Medica*,) in the form of a conserve, with an equal part of sugar, is often highly useful. The seneka root and mezerion in the form of decoction, has also been exhibited

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\*This is decidedly preferable, when it can be had, and ought to be rubbed before the fire, and then wrap the parts in flannel.

with most happy effects. Another valuable medicine in chronic rheumatism is the spirits of turpentine, in doses from twenty to sixty drops three times a day, which may either be given on sugar, in a little water, or incorporated with double the quantity of honey, by melting them together over a gentle heat. But it should be observed that these active stimulants are never to be employed when there is the least febrile action prevailing in the system.

The solution of arsenic has, in some instances, been exhibited with success in the chronic form of this complaint.

Compressing the large arteries by means of a tourniquet or bandage, as mentioned under the head of intermittents, is another remedy which has been employed with advantage in severe rheumatic pains.

In recent cases, where the pain wanders from one part to the other, or whenever the joints are stiffened and rigid, and the pain upon motion severe, or where the muscles have become contracted, by the length and violence of the disorder, immersing the whole body in a warm bath, strongly impregnated with salt, or applying it topically, by pouring warm water upon the limb from a kettle, or fomenting the part with a decoction of mullein two or three times a day, will often soothe the pain, and prove a useful auxiliary to the other means we employ.

Warm bathing, and warm pumping, are remedies of great utility in this disease; but as it requires painful muscular exertion to use the warm bath, it is not often resorted to. The vapor bath, from its superior temperature, is better adapted to its chronic form.

Two other forms of rheumatism ought here to be mentioned; namely, the lumbago, and sciatic. The first attacks the loins or lumbar region, with a most acute pain shooting to the joints of the thigh. This affection is nearly related to the inflammatory rheumatism, and must be treated in the same manner; only, instead of applying blisters over the affected part, they should be applied on the inside of the thighs, and kept running for some time.

The second, or sciatic, a violent, or fixed pain, attacking the hip joint, and partaking of the nature of the chronic rheumatism, is most successfully to be treated like that disease.

*Regimen.*—In acute rheumatism, the patient must be kept on a cool spare diet; but no change whatever will be necessary in the patients ordinary mode of living, in chronic rheumatism. In this species, mustard and horse-radish, (*see Materia Medica*,) used freely in their natural state, or united with food, will be found very beneficial. In all cases of both diseases, flannel, or fleecy hosiery, should be worn next to the skin, a flesh brush be used morning and night, and every precaution be taken to guard against exposure to cold and wet, and also to a moist or damp atmosphere. If the appetite be impaired, stomach bitters, elixir vitriol or some of the tonic medicines may be taken with advantage. Exercise, either of the whole body, or of particular limbs, will be highly important. The want of exercise is apt to produce stiffness in the limbs.

*Prevention.*—Cold bathing, and the use of flannel next to the skin, are the most effectual means of preventing the recurrence of both acute and chronic rheumatism.

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## POISONS.

Any substance, which, taken into the stomach, or into any other part of the body, or applied externally to the body, so as to produce disease or death, may be called a poison. The most active and powerful remedies we use in medicine, if given in large doses operate as poisons; but when given in small ones, are not only innocent but valuable. There are, also, many medicines, which when taken into the stomach are quite harmless, indeed very valuable in the cure of diseases; but, when taken into the lungs by breathing or respiration, are dangerous and destructive in the extreme.—

The poison of the rattle snake, when taken into the stomach is entirely harmless, but the same poison, when inserted into the flesh so as to reach the circulation, immediately produces disorder and death, unless relief can be obtained. I make these introductory remarks on poison, to throw as much light on their operations as possible, in the fewest number of words.

When mineral poisons, such as copper, arsenic, corrosive sublimate, lead, lunar caustic, &c., &c., are taken into the stomach, in too large quantities, you will feel a burning and pricking sensation in the stomach, and great pain in the bowels, accompanied with a constant puking, and a thirst which cannot be satisfied. Your mouth and throat will become rough and dry, as if you had chewed and swallowed an unripe persimmon, and the pain will gradually increase, until it becomes almost insupportable. In this stage, unless speedy relief is had, inflammation will take place, and terminate in mortification and death. Should the dose of poison taken, not be sufficient to destroy life, a fever will take place, which will last for some time, attended with a constant trembling of the nerves.

When vegetable poison, such as Jamestown weed, hemlock, opium, hen bane, deadly night shade, fox glove, wolf's bane, laurel, &c., &c., are taken into the stomach in too great portions, they produce stupor and a constant desire to sleep. The Jamestown weed usually produces effects peculiar to itself:—for which, and a description of the plant, read under that head.

When the poison of animals is introduced into the human system, it is communicated by the bites or stings of serpents, spiders, &c., &c., requiring prompt and immediate attention to the following remedies, which, together with those applicable to other species of poison, mineral and vegetable, are arranged under the proper heads.

*Treatment.*—When any poison has been swallowed, whether vegetable or mineral, the first thing to be done is to empty the stomach, by an emetic or puke of the most active kind. White vitriol, from five to ten, and



even twenty grains, should be given in a little warm water, and repeated every fifteen or twenty minutes if necessary, until free and copious puking is produced, which you must encourage and keep up by large draughts of warm water. The white vitriol is an innocent puke, and acts almost instantaneously; and if the emetic should require assistance, apply tobacco leaves, steeped in warm vinegar or water, to the stomach; they will materially assist the operation of the vitriol. If the patient cannot be made to puke, you must immediately give repeated clysters, made of strong flax-seed tea and sweet milk, and let your patient drink freely of vinegar and water, sweetened with sugar. If the poison taken into the stomach is of the mineral kind—beat up the whites of fifteen eggs with a quart of cold water, and give half a tea-spoonful every three or four minutes; this will greatly assist the puking. From taking large doses of opium or laudanum, your patient will sometimes sink into a stupor, or deep and insensible sleep; when this is the case, stimulants must be given, of sufficient power to rouse him if possible. In these cases, I have sometimes resorted to scalding the soles of the feet with boiling water: and in one instance saw the life of a young man saved, by whipping him to keep him in motion. There is one simple and certain remedy, however, to be found in almost every house: take two tea-spoonfuls of made mustard, or in other words, common mustard seed pounded fine and mixed as if for eating—put them into some warm water, and give the whole as an emetic, and copious puking will be almost immediately produced. This simple and effective remedy, has been the means of saving hundreds, who have accidentally or intentionally swallowed poison.

I have mentioned that poison might be taken into the lungs, by breathing or respiration. Doctor Paris, in his book on diet, speaks decidedly against the introduction of gas lights into the interior of dwellings, and says,—“that carburetted hydrogen is a deadly poison, which, even in a state of great dilution, is capable of exerting a baneful effect on the nervous system. I

have been consulted." says the Doctor, "on several occasions, for pains in the head, and distressing languor, which had evidently been produced by the persons inhaling the unburnt gas in the boxes of play houses." Sir Humphrey Davy, the celebrated chemist, made an experiment on himself, by inhaling pure carburetted hydrogen; and the result was, that after three inspirations, his vital powers were so completely suspended, that he did not recover them until the next day. Many instances have occurred of persons sleeping in close rooms during the night—where small charcoal fires had been kept up for warmth, who had been found dead in the morning. I mention this as a caution; and will, also, notice some other facts respecting poisons, which ought to be attended to by those who value their safety.

Medicines should always be strictly examined, especially if it be given by inexperienced persons, and those not well acquainted with their appearance and qualities: even those who make a profession of smelling medicines, sometimes make dangerous mistakes in them. I have now in my office, three pounds of emetic tartar, which I received for cream of tartar; and, had I administered this medicine without detecting the mistake, the results must have been fatal to many. A merchant of Knoxville, received from a young man who attended a drug store in Baltimore, emetic tartar, for cream of tartar, and was in the very act of giving it to a friend who was indisposed, when the master of the shop arrived, in great alarm, having discovered the blunder, just in time to prevent the fatal consequences. I will give one case more, by way of caution respecting mistakes in medicines. During the summer of 1825, a gentleman from South Carolina, stopped at the house of Mrs. H., of Patrick county, Virginia; he felt somewhat indisposed, and desired to have a dose of salts; through mistake he received and took salt-petre. Nothing saved him but the early arrival of the son of Mrs. H., a gentleman of superior intelligence, who immediately administered a powerful emetic, and relieved him.

Poisons, communicated by the bites of snakes, spiders, and other insects, are immediately to be attended to.—

The moment you are bitten by a snake, you are to tie a tight and strong bandage immediately above the bite—this will prevent the circulation of the blood, and give you time to apply the remedies needful for relief. As soon as possible, dissolve six grains of lunar caustic in six table-spoonfuls of water, and wet the bitten part with it constantly. Every man in the country ought to keep a small piece of lunar caustic in his house; it is sometimes called nitrate of silver, nitric acid, and pure water. If the caustic cannot be obtained, make a poultice of quick lime and soap, and apply it to the part affected, and give the patient as much red-pepper tea as the stomach will bear, and also every hour give him a tablespoonful of the juice of the plantain. In all cases where a physician can be had, the best remedy is to cut out the bitten part. The Indians, when bitten by a poisonous snake, always extract the poison by sucking the wound. There is no danger in this operation—I have told you before that the venom of the snake, if even taken into the stomach, is attended with no danger. The blood should be encouraged to flow from the wound, by scarifying the part immediately about it, and applying the cupping instruments. When you are bitten by a spider, or injured by any other insect, apply a linen rag constantly moistened with laudanum, spirits of hartshorn or strong ley.

I shall record a few cases, in which it will be evident that the bite of the rattle snake may be very easily cured, by extremely simple, and always practicable remedies. The cases may be found in detail, on pages 619, 620 and 621, of the 6th volume of the Medical Recorder. I shall abridge them. 1st. "One evening at my residence, on the hills of Santee," says William Maryant, Esq., formerly a member of Congress, "I heard a violent scream at no great distance. In a few minutes I was called out and was informed that a negro had been bitten by a rattle-snake, and was dead, or dying. I found him motionless and speechless, his jaws locked, and his pulse fluttering and scarcely perceptible. I had heard of the successful use of spirits in such cases, both among the whites and Indians. I therefore took a

glass of whiskey, put into it a table-spoonful of powdered red pepper, and poured it down his throat—in a few minutes it was puked up, as were also three or four more doses. After the fourth glass it remained on his stomach. His pulse improved greatly in a short time, and after getting five or six glasses to remain, I ceased giving him any more, until the pulse fell very fast, and nearly ceased beating. I again commenced giving him the whiskey and pepper—and soon discovered that on ceasing the stimulants, his pulse would again sink to nothing. After taking more than one quart of this liquor, a copious stool followed; the spirit was again administered until his pulse became steady. During the night he took three quarts of whiskey; in the morning he was much better, but very weak—he finally recovered.

2nd. “About a year afterwards, I was called to another slave who had been bitten by a rattle-snake; he was in great pain about the chest, and was puking a green fluid. I gave him repeated doses of whiskey and pepper, until his pulse returned, which had nearly ceased to beat—in twelve hours, by the use of about a quart of this liquor, he was a well man.”

3d. “I related the above cases to a friend, who had lately arrived from Rio Janerio, after a residence of thirteen years. He told me that the serpents of that country were so extremely venomous, as in many instances to produce death in fifteen minutes; and that the natives effect their cures, by giving large doses of spirits, in which herbs had been stewed. He related an instance in which a man was found with one of these most poisonous snakes on him, and biting him repeatedly. The snake was killed, and the man taken to the house, to all appearance dead. In a short time he came to himself, and was unhurt by the poison. The fact was, that he had been very drunk, and had fallen on the snake; the stimulus of the liquor had, no doubt, counteracted the influence of the poison; this was the solution of the difficulty.”

These three cases coincide, strongly, with a case published several years since, in the *National Intelligencer*.



gencer, by the celebrated Doctor Ramsey, in which large doses of brandy and opium were given with complete success, in the bite of a rattle-snake.

The tincture of cantharides, which is nothing more than the Spanish of blistering flies, or our common potato fly, steeped for a few days in whiskey or spirits of any kind. Of this tincture, apply a few drops to the wound until it occasions a redness. By this application the poison is rendered harmless; and the stings of insects or reptiles are entirely removed as soon as the blister arises. This is a late discovery, and truly a valuable remedy.

I cannot quit this interesting subject, without noticing particularly, that a most excellent remedy in the bites of both venomous snakes and spiders, is the immediate application of the soft black mud from spring branches,—or such mud as is used for the daubing of houses. I have never had occasion to try the experiment myself—but fully believe from the best authority, that it is an efficient and powerful application.

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### PAINFUL AFFECTIONS OF THE FACE.

This disease is called by physicians, *tic doloieux*, and happily for mankind, is of very unfrequent occurrence. It is an acutely painful affection of the nerves of the face, particularly over the cheek bone, in which the pain shoots with great quickness and suddenness, and is almost insupportable for a few seconds, when it as suddenly becomes easy. The slightest touch will cause it to dart instantly, and sometimes by opening the mouth quickly, it will return with a jerking and spasmodic affection of the muscles of the face. There is in this complaint—neither swelling of the cheek, nor any species of inflammation, nor does the pain seem deeply seated.

**Treatment.**—Remedies for curing this complaint, have long been objects of attentive research, with the

most distinguished and able physicians. The remedies usually resorted to, but I confess with very little success, are sulphate of zinc, which is white vitriol. Peruvian bark, opium and carbonate of iron, given in doses of twenty grains every fourth hour. As I have just remarked, these are remedies attended with very little success; the carbonate of iron was for some time considered efficient and beneficial—but at length, like the other remedies, it fell into disrepute. We are now indebted to a common weed for the cure of this complaint, a weed which infests our gardens, highways, and barn-yards—it is the common Jamestown weed, usually called the stink weed and thorn-apple:—read under the head Jamestown weed.

A physician of much distinction, Dr. John Eberle, of New York, speaks thus in substance of this weed:—In July last, I was called to see a lady, aged about twenty years, who was suffering very much from this complaint in the right side of her face. The paroxysms or fits of pain, were sometimes so very violent as produce temporary loss of reason. She had been treated by other physicians with the usual remedies; all of which had been found incompetent to afford the least relief. I prescribed for her the extract of Stramonium or Jamestown weed, and gave her a grain of this extract every four hours:—She commenced with this in the evening, and towards morning had intervals of ease, and slept some. She continued this medicine during the succeeding day, and experienced much less pain than she had done for eight days previously. After the fourth dose, she felt some vertigo or dizziness of the head, and was directed to take the medicine only every six hours, in which she persisted until entirely relieved and fully cured, which was in a few days. “The Jamestown weed,” says this eminent physician, “is undoubtedly a medicine of great and valuable powers. In chronic rheumatism, I have employed it in several instances with the most unequivocal advantages. In sciatica, by which the Doctor means hip gout, “also, I prescribed it with complete success in three cases. We are chiefly indebted to Dr. Marcet for our knowledge of its effi-

ciency in affections of this kind," &c. "If I were called upon," says this writer, "to express in a few words, the general opinion which I feel inclined to form from the opportunities I have had of studying the properties of stramonium,"—Jamestown weed,—“I should say, that when given with due caution, and in proper doses, in all cases of chronic disease attended with acute pain, it would invariably lessen the sensibility to pain and suffering.” I fully accord with the Doctor in his opinions, and refer the reader to the head Jamestown weed, where he will find an interesting development of the medical properties and powers of this plant.

The following remedy is taken from the New York Medical Inquirer:—“Mr. Abernathy has administered the nitrate of silver in this disease,” which means lunar caustic, “in the doses of one grain twice a day, made into pills with conserve of roses,” which is nothing more than syrup made of rose leaves with sugar or honey.

“A Mr. Thomas also recommends this preparation in this most distressing disease. The following is a copy of Mr. Thomas’ prescription:—take of nitrate of silver one scruple, nitric acid fifteen drops,” which is commonly called aqua fortis, “pure water three ounces; from forty to sixty drops to be taken twice a-day, in two table-spoonfuls of camphorated julep.” For a description of the method of preparing the camphorated julep, read under that head.

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### LOCKED JAW.

This disease is called by physicians *tetanus*—which means spasm with rigidity—it is from the Greek word which means to stretch. It may be considered an involuntary contraction of all the muscles of the body, while the patient remains perfectly in his senses. It generally arises from wounds; and I have even known it to originate from the slight puncture of a needle, in which case it terminated in the death of an amiable

lady. It comes on with a dull stiffness of the neck and head; in a short time the head and neck becomes difficult to move; the tongue also become stiff and difficult to be moved about or put out; the swallowing becomes painful; there is a tightness across the breast, sometimes attended with pain in the small of the back; the jaws gradually become stiff, and the teeth clenched; this is lock jaw.

*Treatment.*—You are immediately to open the wound, if that be the cause, with a lancet or other sharp instrument, and remove any matter that may be in the wound. Then apply spirits of turpentine to the wound, and if the person is strong, hearty and in full habit, you are to draw blood freely from the arm; then put your patient in the warm bath; I mean here that the whole body is to be immersed in warm water for a time, and given two grains of opium. During the time these operations are making, a skilful physician must be sought for; because the immense quantities of opium which must be given, will make even the best physician dread his own practice. Yet such are the fatal consequences of delay and timidity in locked jaw, that unless bold remedies are used, particularly the use of opium in heavy doses, death must certainly take place. Opium has to be given in this complaint according to the situation of the patient, and the violence of the disease, almost without regarding the quantity. That it is the proper remedy in spasm there can be no doubt; and that the quantities sometimes given in lock jaw are almost incredible, is a fact well known to practitioners of medicine. Tobacco is highly spoken of in this distressing spasm—given in the form of clysters. Dr. Thomas tells us—“that many cases are on record, where the astonishing quantity of an ounce of opium has been given in twenty-four hours.” To proportion the quantity of opium given, combined with the administration of clysters of tobacco, must always require the judgment of a skilful physician, and I therefore recommend that one always be procured where practicable. In desperate cases, where by reason of the



clenching of the teeth, the patient cannot receive any thing into the mouth, it is necessary to remove a front tooth, and sometimes more than one. I have never heard of, nor seen the practice, but should a case of a desperate locked jaw occur in my practice, I would try the effect of a strong bath made of warm ley, or lye, in which the body of the patient should be entirely immersed, at the same time that I would give a clyster containing fifteen grains of emetic tartar—in addition to which I would stimulate the the patient freely with warm water.

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## CANCER.

Cancer generally makes its appearance about the lips, the nose, and about the breasts of females. It sometimes, also, but the instances, I am happy to say, are not very frequent, makes its appearance in the womb, in which the cure is very doubtful. Those who are advanced in life, are much more subject to cancerous affections than young persons; particularly if they have scrofulous constitutions, which have descended to them from their ancestors.—A cancer commences with a small inflamed pimple of a bluish color, which becomes sore, with dark rising edges of a ragged and uneven appearance. On a close examination of the sore, you will discover two whitish lines crossing from the centre to the edge of the sore. At first, a burning sensation is felt in the sore, which is accompanied as the disease increases with sharp shooting pains.—After sometime these pains subside, and the cancer discharges a highly offensive matter; this discharge increases gradually, and the matter communicating to the adjoining parts, finally ends in a large offensive sore or ulcer, of a most dreadful and exhausting nature, always terminating, unless a cure is effected, in a lingering, painful and horrible death.

*Treatment.*—The moment cancer is discovered, dis-

solve ten grains of corrosive sublimate in a gill of whiskey, or a gill of strong spirits of any kind. Apply cautiously this mixture to the affected part; it may be done by making a small rag swab, wetting it with the solution just named, and touching the affected or sore part with it very gently.—This operation is to be performed once a-day, until the cancer is destroyed. This is a powerful medicine, and the pain produced by its application is very severe; but by an early application of this remedy, and bearing the pain of its application fifteen or twenty minutes for a few days, it will kill the cancer. It should never be used on large ulcers or cancerous sores, the pain it inflicts being as severe as if a red hot iron were applied. In many cases, when applied at an early stage of cancer, I have known this remedy, successful. The sores should be washed with salt and water, and dressed with charcoal plasters. To kill the pain, give opium or laudanum: see table. But notwithstanding what has been said of the foregoing remedy, in order to insure a successful cure, I think the parts ought to be removed or cut out at an early period of the disease. I have performed the operation fifteen or sixteen times with success; the last operation was performed on Mr. H——, of Monroe county, Virginia, during my residence in Botetourt county, of the same State, assisted by my medical friends, Drs. M'Dowell and Foot, two gentlemen of distinction in the medical profession. The gentleman on whom the operation was performed, was about forty-eight years of age. The cancer was seated in the lower lip, and was of such a size as to require the removal of the lower lip entirely. By the suggestions of Dr. M'Dowell, but with great caution, I cut well down the chin and secured the edges of the incision together, after taking out the cancer. Singular as it may appear, a new lip was formed. The wound healed with the first intentions; and when it was entirely well, the mouth was so extremely small as scarcely to admit the end of the fore finger. The mouth however gradually distended itself by the exertions of nature, and is now both useful and beautiful. Before the operation, the

mouth was large and the lips coarse and fleshy. On my way out to Tennessee, I presented to Dr. Powell of the Boatyard, the old lip, and I doubt not he has it now in his possession. A remedy for cancer appeared in the public journals some years since—which, from its marks of authenticity of statement, and success in the case of Thomas Tyrrel, I think proper to place it on a more durable record. It is simply the use of “a strong potash,” made of the ley of the ashes of red oak bark, boiled down to the consistence of molasses.—With this substance, the cancer must be first covered, and in about an hour afterwards, the whole is to be covered with a plaster of tar. This must be removed after a few days, and if there are any protuberances or lumps in the sore, the applications are to be renewed. As far as an opinion can be relied on, without actual experiment, I think the remedy a good one.

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## SCALDS AND BURNS.

Because we all know well what scalds and burns are, and because the saving of space for matters of high interest, is important to both the subscribers of this work and myself, I shall not attempt to describe them.

*Treatment.*—In these accidents, which sometimes unfortunately arise from negligence, the important point is to reach such remedies as are immediately at hand, or are easily obtained for affording direct relief from excruciating pain. Nature, always a tender parent, bountifully affords the best and most soothing remedy, *cold water*; in which the parts affected are to be immediately plunged. If ice can be obtained, which is but water under another character, its application will be as good, if not better than mere water, which sometimes cannot be had of sufficient coldness. If the body is severely scalded or burned, apply cloths kept constantly wet with the coldest water. Whether the scald or burn takes place in children, and to no great

extent, the application of common tar immediately to the injury, is a valuable remedy not often resorted to, but which I earnestly recommend. The application of carded cotton to a scald or burn, is also an excellent remedy, and one which is nearly always convenient.—The old method of applying sweet or olive oil immediately to a scald or burn, is a bad plan, and ought never to be resorted to, until cold water or ice has been applied for reducing the inflammation; then olive or sweet oil will answer a valuable purpose. If oil is not convenient, which is often the case, the poultices made of raw Irish potatoes, carrots or turnips, will be proper; the oil, however, if possible to be obtained, is preferable. When the patient has been in the greatest pain, and every remedy I had applied gave but little relief, I have always been able to give instant ease, if I had or could procure it, by the application of Turner's cerate. For the method of making this very valuable salve, look under that head. It must be applied by spreading it on linen rags, and covering the burned or scald parts with them; and I suppose I need not tell you that these cerate plasters are to be supplied by new ones, every day laid on fresh. This cooling and soothing remedy, seems to act like magic, in giving relief from the most horrible suffering. On my arrival in Montgomery county, Virginia, I was called in consultation with Dr. Joseph Miller, who was a physician by nature, and a man of the highest native genius, a man who must have stood at the head of his profession, had his great intellectual powers been aided by adequate opportunities of education. With this gentleman I attended on Major ——. He had been taken with a fit, and fallen into the fire, by which he was sitting, after his family had retired to bed. Before he was discovered by his family and taken out, he was literally roasted; his ribs were perfectly exposed on the right side, and the motion of the abdominal viscera, the intestines or guts, could easily be distinguished through the thin membrane. His situation was as truly horrible as can well be imagined, and his sufferings were so very great, as frequently to induce him to pray to us, that some-



thing might be given him to end the miseries of his existence. Those sufferings must indeed be unspeakable, which destroy in man the natural and deep-seated love of life. By the application of Turner's cerate, which was spread on a sheet and applied to him, and slippery-elm tea given internally, this gentleman recovered, and is now living in Montgomery county, Virginia, near Christianburg. I mention this case in all its horrors, to induce every family into whose hands this book may fall, always to have in their possession Turner's cerate for immediate application.

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### CORNS.

We all know what corns are, and it is useless to consume time in describing them.

*Treatment.*—To get rid of them in the shortest possible time, bathe the foot or feet in warm water, about half an hour before going to bed. When the corns have become soft from bathing, shave down the horny parts smooth, but not so close as to produce blood; then moisten the tops of them with spittle, and rub over them a little lunar caustic, which you can easily procure. This caustic must be gently rubbed on, until a sufficiency of it sticks on the corns to change them first to a dark gray color, and next to a black. Put a little cotton over them, to prevent the stocking from rubbing them, and in a few days they will come out by the roots; this is the remedy of Dr. Brown, of Philadelphia, and it is a good one.

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### WARTS.

We all know what warts are, and it is also useless to describe them.

*Treatment.*—Put on each wart a small blister of Spanish flies, which can easily be confined by adhesive

plaster of any kind. In a few days the warts will come out, when you may use the lunar caustic, as in the case of corns; or you may wet the warts with a little sulphuric acid or oil of vitriol, which will soon bring them off; or with nitric acid or aqua fortis, which produce the same effect.

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### VACCINE DISEASE, OR, COW-POX.

The vaccine discovery may be justly considered as one of the most extraordinary blessings entailed on man: since it is incontestibly a certain security against the small-pox, a disease distressing in its symptoms, formidable in its appearance, doubtful in event, and to which mankind are generally exposed.

The comparative advantages which the kine-pox has over the small-pox, are very great and striking. First, it is neither contagious nor communicable by effluvia; secondly, it excites no disposition to other complaints; thirdly, it can be communicated, with safety, to children at the earliest age, and almost in every situation; and fortunately, it is never fatal. What more can be required to produce a general conviction of its superior utility? The method of performing the inoculation is, to hold the lancet nearly at a right angle with the skin, in order that the infectious fluid may gravitate to the point of the instrument, which should be made to scratch the skin repeatedly, until it becomes slightly tinged with blood. The operator must be cautious not to make the wound deeper than necessary, as the inoculated part will be more liable to inflammation, which may destroy the specific action of the virus.

The most certain method of securing the infection is, to inculcate with fresh fluid from the pustule; but as this is often impracticable, it is advisable to hold the infected lancet over the steam of boiling water to soften the hardened matter. Where the virus has been procured upon thread, make a small longitudinal incision in the arm, and insert in it the affected thread, and de-

tain it there by court-plaster, until the disease be communicated. Matter may also be procured from the scab. The mode of inoculating from it is the same as from the fluid, taking care, however, previously to moisten it with tepid water, and to use the matter of the inner scab. The scab will frequently retain its virus for months, provided it be kept in a close box.

The first indication of the success of the operation is a small inflamed spot where the puncture has been made, which is very distinguishable about the third, fourth, or fifth day. This continues to increase in size, becomes hard, and a small circular tumor is formed, rising a little above the level of the skin. About the sixth or seventh day, the centre of the tumor shows a discolored speck, owing to the formation of a small quantity of fluid, which continues to increase, and the pustule to fill, until about the tenth day.

At this time it shows in perfection the characteristic features which distinguish it from the variolous pustule. Its shape is circular, or somewhat oval, but the margin is always well defined, and never rough and jagged.—The edges rise above the level of the skin, but the centre is depressed, and has not that plumpness which marks the small-pox pustule. As soon as the pustule contains any fluid, it may be opened for future inoculation.—About two days before, and two after the eighth day, making a period of four days, is the season when the matter is found in its greatest activity.

At the eighth day, when the pustule is fully formed, the effects on the constitution begin to appear. The general indisposition is commonly preceded by pain at the pustule and in the armpit, followed by head-ache, some shivering, loss of appetite, pain in the limbs, and a feverish increase of pulse. These continue with more or less violence for one or two days, and always subside spontaneously without leaving any unpleasant consequences. During the general indisposition, the pustule in the arm, which had been advanced to maturity in a regular, uniform manner, becomes surrounded with a circular inflamed margin, about an inch or an inch and a half broad, and this blush is an indication that the

whole system is effected; for the general indisposition, if it occur at all, always appears on or before the time when the efflorescence becomes visible. After this period, the fluid in the pustule gradually dries up, the surrounding blush becomes fainter, and in a day or two imperceptibly dies away, so that it is seldom to be distinguished after the thirteenth day from inoculation.—The pustule now no longer increases in extent, but on its surface a hard thick scab, of a brown or mahogany color is formed, which, if not removed, remains for nearly a fortnight, until it spontaneously falls, leaving the skin beneath perfectly sound and uninjured.

The above is the progress of the vaccine inoculation in the greater number of cases, from the time of insertion to that of drying up of the pustule, with only the variation of a day or two in the periods of the different changes. The successive alterations, that take place in the local affection, appear to be more constant and more necessary to the success of the inoculation, than the general indisposition. With respect to the latter, the degree is very various; infants often pass through the disease without any perceptible illness; with children it is extremely moderate; and even with adults, its severity is but for a few hours, and then never dangerous.

Very little medical care is necessary to conduct the patient through this disease with safety, especially when children are the patients. Adults may take a dose of salts on the eighth day, which will be particularly useful in plethoric habits. In general, no application to the inoculated part will be required, unless the inflammation increase, and the pustule became painful; then the part should be kept moist with cold vinegar and water, or lead-water, till the pustule be dried up.

To conclude, much attention and discrimination are necessary in the vaccine inoculation, to ascertain whether the infection has fully taken, and whether or not the disorder be complete and genuine. The regularity, with which the local disease at the place of inoculation runs through its several stages, seems to be the principal point to be attended to; for the presence



of fever is certainly not necessary to constitute the disease, since the greater number of infants have no apparent indisposition.

Therefore, when the vaccine inoculation is followed by no local disorder, or only a slight redness at the punctured part, for a day or two, we can have no doubt that the operation has failed. When the pustule advances in very hasty and irregular progress, when the inoculated puncture, on the second or third day after insertion, swells considerably, and is surrounded with an extensive redness, the premature inflammation very clearly indicates a failure in the operation, even when the inoculation has advanced for the first few days in a regular manner; but when, about the sixth day, instead of exhibiting a well formed pustule and vesicle of fluid, the part runs into an irregular festering sore, the purpose of inoculation is equally defeated, and these varieties require it to be watched with an attentive and experienced eye; since they might readily lead to a false, and perhaps fatal idea of security against any subsequent exposure to small-pox. The circumstance, however, which most strikingly distinguishes the genuine from the spurious disease, is the appearance of the pustule: In the genuine, the pustule has a *well defined elevated margin*, with an indention in its centre, resembling a button mould. The spurious is either pointed like a small common abscess, or is rugged and irregularly formed, like an ordinary sore. Every other symptom, almost, occurs in each disease.

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#### SMALL-POX—VARIOLA.

This disease, which originally came from Arabia, is, since the discovery of vaccination, not so general as heretofore; nor does it appear to be of so malignant a type. It is, nevertheless, a most contagious malady; and for many years proved the scourge of civilized as well as uncivilized nations. It generally makes its appearance about the spring. It is very frequent in sum-

mer, less so in autumn, and still less in winter. Children are most liable to have it; and those whose food is unwholesome, who want proper exercise, and abound with gross humors, run the greatest hazard of catching it.

The disease is distinguished into the distinct and confluent kind; the latter of which is always attended with danger.

*Causes.*—The small-pox is commonly caught by infection. Since the disease was first brought into Europe, the infection has never been wholly extinguished, nor have any proper methods, as far as I know, been taken for that purpose; so that now it has become in a manner constitutional.

*Symptoms.*—This disease is so generally known, that a minute description of it is unnecessary. Children commonly look a little dull, seem listless and drowsy for a few days before the more violent symptoms of the small-pox appear. They are likewise more inclined to drink than usual, have little appetite for solid food, complain of weariness, and, upon taking exercise, are apt to perspire. These symptoms are succeeded by slight fits of cold and heat in turns, which, as the time of eruption approaches, become more violent, and are accompanied with pains in the head and loins, vomiting, &c. The pulse is quick, with a great heat of the skin, and restlessness. When the patient drops asleep, he wakes in a kind of horror, with a sudden start, which is a very common symptom of the approaching eruption; as are also convulsion-fits in very young children.

About the third or fourth day from the time of sickening, the small-pox generally begin to appear, sometimes, indeed, they appear sooner, but that is no favorable symptom. At first they very nearly resemble flea-bites, and are soonest discovered on the face, arms, and breast.

The most favorable symptoms are a slow eruption, and an abatement of the fever as soon as the pustules appear. In a mild, distinct kind of small pox, the pus-

tules seldom appear before the fourth day from the time of sickening, and they generally keep coming out gradually for several days after. Pustules which are distinct, with a florid red basis, and which fill with thick purulent matter, first of a whitish, and afterwards of a yellowish color, are the best.

A livid brown color of the pustules is an unfavorable symptom; as also when they are small and flat, with black specks in the middle. Pustules which contain a thin watery ichor are very bad. A great number of pox on the face is always attended with danger. It is likewise a bad sign when they run into one another.

It is a most unfavorable symptom when petechiæ, or purple, brown, or black spots are interspersed among the pustules. Bloody stools or urine, with a swelled belly, are bad symptoms; as is also a continual strangury. Pale urine and a violent throbbing of the arteries of the neck are signs of an approaching delirium or of convulsion-fits. When the face does not swell, or falls before the pox come to maturity, it is very unfavorable. If the face begins to fall about the eleventh or twelfth day, and at the same time the hands and feet begin to swell, the patient generally does well; but when these do not succeed each other, there is reason to apprehend danger. When the tongue is covered with a brown crust, it is an unfavorable symptom. Cold shivering fits coming on at the height of the disease, are likewise unfavorable. Grinding of the teeth, when it proceeds from an affection of the nervous system, is a bad sign; but sometimes it is occasioned by worms, or a disordered stomach.

All that is, generally speaking, necessary during the eruptive fever, is to keep the patient cool and easy. He should not be confined to bed, but should sit up as much as he is able, and should have his feet and legs frequently bathed in lukewarm water. His food ought to be very light, and he should be as little disturbed with company as possible.

Much mischief is done at this period by confining the patient too soon to his bed, and plying him with warm cordials, or sudorific medicines. Every thing

that heats and inflames the blood increases the fever, and pushes out the pustules prematurely. This has numberless ill effects. It not only increases the number of pustules, but likewise tends to make them run into one another; and when they have been pushed out with too great violence, they generally fall in before they come to maturity.

The food in this disease ought to be very light, and of a cooling nature, as panado, or bread boiled with equal quantities of milk and water, good apples roasted, or boiled with milk, and sweetened with a little sugar, or such like.

The drink may be equal parts of milk and water, clear sweet whey, barley-water, or thin gruel. After the pox are full, butter-milk, being of an opening and cleansing nature, is a very proper drink.

*Medicine.*—This disease is generally divided into four different periods, viz: the fever which precedes the eruption, the eruption itself, the suppuration or maturation of the pustules, and the secondary fever.

It has already been observed, that little more is necessary, during the primary fever, than to keep the patient cool and quiet, allowing him to drink diluting liquors and bathing his feet frequently in warm water. Though this be generally the safest course that can be taken with infants, yet adults of a strong constitution and plethoric habit sometimes require bleeding. When a full pulse, a dry skin, and other symptoms of inflammation, render this operation necessary, it ought to be performed.

[Mild cathartics are highly useful during the eruptive fever. Dr. Mead and Boerhaave recommend calomel as one of the best purgatives in small pox. It is mild in its operation, and seems to possess peculiar powers in moderating the violence of the disease. In cases of great excitement, more active purging may be resorted to; as efficient doses of calomel and jalap, or calomel and scammony; aided occasionally by the neutral purgative salts, or castor oil. Gentle purgatives may be beneficially employed throughout the whole course of



the disease. Emetics are sometimes useful in the commencement of the disease, particularly when there is evidence of vitiated secretions in the stomach. Cooling diaphoretics, as nitre and antimony, and the spirit of Mindererus, may often be exhibited with advantage during the eruptive fever. "But the most grateful, and at the same time the most safe and valuable means for moderating the eruptive fever, and thereby lessening the number of pustules, is the cooling regimen. The free admission of cool air into the sick chamber during the eruptive fever, is in all cases, whether the disease be of the distinct or the confluent variety, of great importance; and it seldom indeed fails to mitigate the symptoms, in a greater or less degree, throughout the whole course of the disease. The temperature of the sick chamber must of course be regulated according to the season of the year, and the degree of febrile excitement present."

In violent cases, without great care is observed, the globe of the eye is apt to become affected by the pustules, and result in blindness. To prevent this, pieces of folded linen wet with cold water, or cold milk and water, should be kept applied to the eyes during the eruptive fever.]

The rising of the small-pox is often prevented by the violence of the fever; in this case the cool regimen is strictly to be observed. The patient's chamber must not only be kept cool, but he ought likewise frequently to be taken out of bed, and to be lightly covered with clothes while in it.

If the patient be troubled with a strangury, or suppression of urine, which often happens in the small-pox, he should be frequently taken out of bed, and, if he be able, should walk across the room with his feet bare.—When he cannot do this, he may be set on his knees in bed, and should endeavor to pass his urine as often as he can. When these do not succeed, a teaspoonful of the sweet spirits of nitre may be occasionally mixed with his drink. Nothing more certainly relieves the patient, or is more beneficial in the small-pox, than a plentiful discharge of urine.

If the mouth be foul, and the tongue dry and chapped, it ought frequently to be washed, and the throat gargled with water and honey, sharpened with a little vinegar or currant-jelly.

When petechiæ, purple, black, or livid spots appear among the small-pox, the Peruvian bark must immediately be administered, in as large doses as the patient's stomach can bear. For a child, two drachms of bark in powder may be mixed in three ounces of common water, one ounce of simple cinnamon water, and two ounces of the syrup of orange or lemon. This may be sharpened with the spirit of vitriol, and a table-spoonful of it given every hour. If it be given to an adult in the same form, he may take at least three or four spoonfuls every hour. This medicine ought not to be trifled with, but must be administered as frequently as the stomach can bear it; in which case it will often produce very happy effects. I have frequently seen the petechiæ disappear, and the small-pox, which had a very threatening aspect, rise and fill with laudable matter, by the use of the bark and acids.

[Under similar circumstances—that is, where the pustules are slow in filling up, or the fluid in them remains watery—opium in combination with camphor is highly recommended by Dr. Philip. In cases attended with delirium, camphor is particularly valuable. It may be given in either pills or julep.]

When the eruption subsides suddenly, before they have arrived at maturity, the danger is very great. In this case blistering plasters must be immediately applied to the wrists and ancles. Sometimes bleeding has a surprising effect in raising the pustules after they have subsided; but it requires skill to know when this is proper, or to what length the patient can bear it.—Sharp cataplasms, however, may be applied to the feet and hands, as they tend to promote the swelling of these parts, and by that means to draw the humors towards the extremities.

The most dangerous period of this disease is the secondary fever. This generally comes on when the small-pox begins to blacken, or turn on the face; and

most of those who die of the small-pox are carried off by this fever.

Nature generally attempts, at the turn of the small-pox, to relieve the patient by loose stools. Her endeavors this way are by no means to be counteracted, but promoted, and the patient, at the same time, supported by food and drink of a nourishing and cordial nature.

If, at the approach of the secondary fever, the pulse be very quick, hard and strong, the heat intense, and the breathing laborious, with other symptoms of inflammation of the breast, the patient must immediately be bled. The quantity of blood to be let must be regulated by the patient's strength, age, and the urgency of the symptoms.

But in the secondary fever, if the patient be faintish, the pustules become suddenly pale, and if there be great coldness of the extremities, blistering-plasters must be applied, and the patient must be supported with generous cordials.

[Emetics are often of great utility in such cases.]

The pustules should be opened when they begin to turn of a yellow color. Very little art is necessary for this operation. They may either be opened with a lancet or a needle, and the matter absorbed by a little dry lint. As the pustules are generally first ripe on the face, it will be proper to begin with opening these, and the others of course as they become ripe. The pustules generally fill again, a second, or even a third time, for which cause the operation must be repeated, or rather continued, as long as there is any considerable appearance of matter in the pustules.

Opening the pustules not only prevents the resorption of the matter into the blood, but likewise takes off the tension of the skin, and by that means, greatly relieves the patient. It likewise tends to prevent the pitting, which is a matter of no small importance.

[Keeping the patient's chamber darkened, will very generally prevent the formation of pits or scars from the pustules, even in cases of great violence. Lunar caustic has also been used for the same purpose. It

appears, from the reports of those who have used it, that, "if the pustules are opened with a lancet, and touched with a pointed piece of caustic, on the *first or second day* of their appearance, they will be wholly destroyed, and leave no marks; but on the *third day* it will be quite useless."]

It is generally necessary, after the small-pox are gone off, to purge the patient. If, however, the body has been open through the whole course of the disease, or if buttermilk and other things of an opening nature have been drank freely, after the height of the small-pox, purging becomes less necessary; but it ought never to be wholly neglected.

When imposthumes happen after the small-pox, which is not seldom the case, they must be brought to suppuration as soon as possible, by means of ripening poultices; and when they have been opened, or have broken of their own accord, the patient must be purged.

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#### VARIOLOID--MODIFIED SMALL-POX.

[From the earliest records of the disease, small-pox epidemics have generally been accompanied by various eruptive diseases, partaking in a greater or less degree of the characteristics of true small-pox. Since the introduction of vaccination, these anomalous eruptions have become much more common; and the one now under consideration is very generally looked upon as a modification of the original disease, produced by the influence of the contagion of small-pox upon systems imperfectly protected against it by previous vaccination. It has been known to occur, however, among those who have had small-pox from inoculation, as well as in a few cases where that disease had been contracted naturally.

Varioloid is generally mild in character, but is very irregular in this respect; presenting in different cases every degree of violence, from the mildest forms of chicken-pox to the higher grades of distinct small-pox.

From the variableness of the symptoms, it is often



difficult to decide for some days whether the disease be varioloid or true small-pox. "Very generally, however, the smallness of the pustules, the whey-like fluid which they contain, and particularly the early period at which they begin to dry and scab, will enable us to distinguish such cases from genuine small-pox." Attention to the following circumstances, will, in most cases, enable us to decide on the true character of the eruption.—  
"1. The eruption appears in successive clusters, occurring at uncertain periods between the second and fifth day. 2. The eruption seldom, if ever, enters into complete suppuration, as do the small-pox. 3. The eruption is not attended with fever, except in very violent cases. 4. Desiccation or scabbing invariably occurs much earlier than in regular small-pox; commencing generally as early as the fifth or sixth day; and the scabs usually separate about the eighth or ninth day, leaving red disks or tuberculous elevations instead of depressions." By comparing this with the course invariably pursued by true small-pox, we can in all cases distinguish between the two diseases with great certainty.

Most cases of this disease are so mild as to require no attention farther than a strict adherence for a few days to a cooling antiphlogistic regimen. When the symptoms are more violent, and demand medical treatment, the same course is to be pursued, in every respect, that has been recommended as proper in mild cases of true small-pox.]

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#### VARICELLA—CHICKEN-POX.

This disease is also termed *Swine-pox*; and is generally ushered in by restlessness, thirst, loss of appetite, and slight fever. Occasionally, however, the febrile symptoms are violent, with great pain in the head, back and extremities. These symptoms disappear as soon as the eruption begins to come out. "It appears first on the breast and back, next on the face and scalp, and lastly on the extremities." The vesicles "generally

come out in succession during three or four days, so that at the same time, some will be just appearing, some perfectly matured, others shrivelling, and a fourth set converted into scabs." The fluid contained in them never gets solid, and pits are seldom left behind. The disease rarely occurs a second time in the same person.

It is a very simple disease, and in the milder forms requires no medical treatment. When the fever is very violent, bleeding and purging may be resorted to with great advantage. In all cases, the patient should be kept moderately cool, and restricted to light diet, with tepid diluent drinks.]

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#### MEASLES. (*Morbilli* or *Rubeola*.)

The measles appeared in Europe about the same time with the small-pox, and have a great affinity to that disease. They both came from the same quarter of the world, are both infectious, and seldom attack the same person more than once. The measles are most common in the spring season, and generally disappear in summer. The disease itself, when properly managed, seldom proves fatal; but its consequences are often very troublesome.

*Causes.*—This disease, like the small-pox, proceeds from infection, and is more or less dangerous according to the constitution of the patient, the season of the year, the climate, &c.

*Symptoms.*—The measles, like other fevers, are preceded by alternate fits of heat and cold, with sickness and loss of appetite. The tongue is white, but generally moist. There is a short cough, a heaviness of the head and eyes, drowsiness, and a running at the nose.— Sometimes, indeed, the cough does not come before the eruption has appeared. There is an inflammation and heat in the eyes, accompanied with a defluxion of rheum

and great acuteness of sensation, so that they cannot bear the light without pain. The eyelids frequently swell so as to occasion blindness. The patient generally complains of his throat; and a vomiting or looseness often precedes the eruption. The stools in children are commonly greenish; they complain of an itching of the skin, and are remarkably peevish. Bleeding at the nose is common, both before and in the progress of the disease.

About the fourth day, small spots, resembling flea-bites, appear, first upon the face, then upon the breast, and afterwards on the extremities: these may be distinguished from the small-pox by their scarcely rising above the skin. The fever, cough, and difficulty of breathing, instead of being removed by the eruption, as in the small-pox, are rather increased; but the vomiting generally ceases.

About the sixth or seventh day from the time of sickening, the measles begin to turn pale on the face, and afterwards upon the body; so that by the ninth day they entirely disappear. The fever, however, and difficulty of breathing often continue, especially if the patient has been kept upon too hot a regimen, Petechiæ, or purple spots may likewise be occasioned by this error.

A violent looseness sometimes succeeds the measles; in which case the patient's life is in imminent danger.

Such as die of the measles generally expire about the ninth day from the invasion, and are commonly carried off by peripneumony, or inflammation of the lungs.

The most favorable symptoms are a moderate looseness, a moist skin, and a plentiful discharge of urine.

When the eruption suddenly recedes, and the patient is seized with delirium, he is in the greatest danger. If the measles turn too soon of a pale color, it is an unfavorable symptom, as are also great weakness, vomiting, restlessness, and difficulty of swallowing. Purple or black spots appearing among the measles, are very unfavorable. When a continual cough, with hoarseness, succeeds the disease, there is reason to suspect an approaching consumption of the lungs.

Our business in this disease is to assist nature, in

throwing out the eruption, if her efforts be too languid, but when they are too violent, they must be restrained by evacuations and cool diluting liquors. We ought likewise to endeavor to appease the most urgent symptoms, as the cough, restlessness, and difficulty of breathing.

*Regimen.*—The cool regimen is necessary here as well as in the small-pox. The food, too, must be light, and the drink diluting. Acids, however, do not answer so well in the measles as in the small-pox, as they tend to exasperate the cough. The most suitable liquors are decoctions of liquorice with marshmallow roots and sarsaparilla, infusions of linseed or of the flowers of elder, saffron, balm-tea, clarified whey, barley-water, and boneset-tea. These, if the patient be costive, may be sweetened with honey; or, if that should disagree with the stomach, a little manna may occasionally be added to them.

*Medical Treatment.*—The measles being an inflammatory disease, without any critical discharge of matter, as in the small-pox, bleeding is necessary, especially when the fever runs high, with difficulty of breathing, and great oppression of the breast. I do not know any disease wherein bleeding is more necessary than in the measles. I have always found it relieve the patient.—Practitioners, however, are at variance with respect to the time bloodletting may be employed with the most advantage. Dr. Morton thinks it requisite as soon as the eruption is completed. Sydenham recommends it after the eruption has disappeared: but practice, in this respect, should be regulated by the degree of the accompanying inflammation of the lungs, without attending to the particular period of the disorder or the state of the eruption: this is the generally approved practice at the present day.

Bathing the feet and legs frequently in lukewarm water both tends to abate the violence of the fever, and to promote the eruption.

The patient is often greatly relieved by vomiting.—



When there is a tendency this way, it ought to be promoted by drinking lukewarm water, or weak camomile tea.

When the cough is very troublesome, with dryness of the throat, and difficulty of breathing, the patient may hold his head over the steam of warm water, and draw the vapor into the lungs.

If at the turn of the disease the fever assumes new vigor, and there appears great danger of suffocation, the patient must be bled according to his strength, and a blister applied, with a view to prevent the load from being thrown on the lungs, where, if an inflammation should fix itself, the patient's life will be in imminent danger.

In case the measles should suddenly disappear, or before the proper time, it will be necessary to pursue the same method which we have recommended when the small-pox recede. Blisters must be applied to the legs and arms, and the body rubbed all over with warm flannels. Warm poultices may likewise be applied to the feet and palms of the hands.

When inflammation attacks the chest, a warm bath strongly impregnated with salt, has been found a powerful subsidiary remedy, in addition to bloodletting.

If the symptoms manifest a tendency to a malignant form of disease, they must be treated accordingly, as directed in typhus fever.

Opiates are sometimes necessary, and should be given combined with some saline diaphoretic, at bed-time: but, they should never be given except in cases of extreme restlessness, a violent looseness, or when the cough is very troublesome. For children the syrup of poppies is sufficient. A teaspoonful or two may be occasionally given, according to the patient's age, or the violence of the symptoms.

During the whole course of the disease it will be highly proper to keep the body open; and therefore, if costiveness exist, it should be obviated by the use of gentle purgatives, as the syrup of rhubarb, with occasional doses of calomel or blue pills. Where the difficulty of breathing and oppression at the chest are not

relieved by bleeding, and other antiphlogistic means, a blister may be applied in the neighborhood of the part or between the shoulders. In removal of local inflammation, a blister often proves a valuable remedy.

After the measles are gone off, the patient ought to be purged. This may be conducted in the same manner as directed in the small-pox.

If a violent looseness succeeds the measles, it may be checked by taking for some days a gentle dose of rhubarb in the morning, and an opiate over-night; but if these do not remove it, bleeding will seldom fail to have that effect.

Patients recovering after the measles should be careful what they eat or drink. Their food for some time ought to be light, and in small quantities; and their drink diluting, and rather of an opening nature, as butter milk, whey, and such like. They ought also to beware of exposing themselves too soon to the cold air, lest a suffocating catarrh, an asthma, or a consumption of the lungs, should ensue.

Should a cough, with difficulty of breathing, and other symptoms of a consumption, remain after the measles, small quantities of blood may be frequently let at proper intervals, as the patient's strength and constitution will permit. The camphor mixture combined with a fourth part of the water of acetated ammonia, forms a very useful medicine in that particular species of consumption which frequently succeeds the measles. He ought likewise to remove to a free air, if in a large town, and to ride daily on horseback. He must keep close to a diet consisting of milk and vegetables; and lastly, if these do not succeed, let him remove to a warmer climate.

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#### SCARLET FEVER. (*Scarlatina*.)

The scarlet fever is so called from the color of the patient's skin, which appears as if it were tinged with red wine. It happens at any season of the year, but is

most common towards the end of summer: at which time it often seizes whole families. Children and young persons are most subject to it.

[There are several species of scarlet fever, or rather, authors have divided the disease into three varieties, the simple, the anginose, and the malignant; while Dr. Armstrong has again subdivided the last variety, into "the inflammatory, the congestive and the mixed" modifications of scarlation. These distinctions are too minute and circumstantial for popular practice, and we shall therefore describe the disease under two forms only, viz: the simple or mild scarlet fever; and scarlet fever accompanied by ulceration of the throat, and malignant symptoms.

*Symptoms.*—The mild form of the disease is preceded by coldness and shivering, to which succeed febrile heat, thirst, and an accelerated pulse. The face swells about the fourth day, and irregular patches of a florid red color make their appearance on various parts of the body. In the course of three or four days afterwards the eruption disappears, and the cuticle falls off in brawny scales.

The second variety is marked by previous lassitude, dejection of the mind, pain in the head, followed by soreness, and a sense of stiffness in the muscles of the neck and shoulders, shiverings, and other febrile symptoms. To these succeed nausea; occasional vomiting; difficulty of swallowing; and a hurried respiration, with frequent sighing. The skin is red, hot, and dry; the breath burning to the lips; great thirst; a quick, weak, and sometimes a hard pulse; the tongue soon becomes dry, and very florid along the edges, with inflamed points projecting from its surface; and small darting pains are felt in different parts of the body, as if pricked with a needle. About the third day, the red appearance of the face, neck and breast, becomes more intense, scarlet patches appear about the nose and mouth; the glands beneath the lower jaw are painful to the touch, and enlarged; and the palate, tonsils, and inside of the throat partake of the general redness. Specks and col-

lection of viscid mucus are frequently observed, similar to the sloughs which are seen in malignant sore throat. In a few hours the redness becomes universal over the whole body, and increases to a great degree of intensity. Upon pressure with the fingers, it disappears, and is perfectly smooth to the touch, nor is there the least appearance of pimples or pustules. About the fifth or sixth day, the intense redness abates gradually, and a brown color succeeds, when the skin becomes rough, and peels off in small scales like bran, and the patient is gradually restored to health. It sometimes happens, however, that after a few days abatement, unaccountable languor and debility are felt, followed by stiffness in the limbs, disturbed sleep, disrelish for food, accelerated pulse, scarcity of urine, and dropsical swellings. In cases of a very malignant type, in addition to the common symptoms, there are great heat, nausea, and vomiting; with a small, quick pulse, and frequent and laborious breathing. Ulcerations appear on the tonsils and adjoining parts, covered with dark sloughs, and surrounded by a livid base. The efflorescence appears about the third day, but without relief, it assumes a dark or livid color, and between the patches, purple spots are intermixed. Delirium arises, a debilitating diarrhœa comes on, and not unfrequently hemorrhages from the nose, mouth and bowels, occur. It resembles very closely what is termed the malignant or ulcerous sore throat. (Thomas.) In most cases of this disease, the scarlet blush may be first discovered on the knees and elbows.

*Treatment.*—In the mild form of the disease, the exhibition of gentle cathartics, so as to keep the bowels open every day, together with the use of acid drinks, and cooling diaphoretics, and sponging the body with cold water during the febrile excitement, will generally arrest the disease. Bloodletting and emetics, however, are occasionally required in this species of scarlet fever; the first when the febrile reaction runs high, and the second when there is much nausea present. Children and young persons are sometimes seized with stupor or



epileptic fits in the beginning of the disease. In such cases, the feet and legs should be bathed in warm water, and a blister may be applied to the back of the neck.

In cases of a high grade, bloodletting is among the most successful and important means of cure. The great majority of writers are opposed to this practice, but experience has shown that when promptly and efficiently practised, it is capable of controlling and cutting short the malady with more certainty than any other remedy. Mr. Dewar, of Scotland, has recently published an account of the success of the bleeding plan in his hands, and my own experience with the lancet goes to confirm his in every respect. He says, "I have attended 183 persons laboring under this disease in its acute stage, that is, with the eruption still present upon the body, and out of that number it has been my good fortune to lose only two, (This was in the space of two years.) The gratifying success now mentioned, with which the cases occurring in my practice have been attended, is to be attributed to the early and efficient employment of bloodletting. In every case in which the remedy was properly used, I have found the symptoms greatly mitigated, and in many the disease wholly and suddenly subdued. To accomplish this purpose, however, a scanty or long-deferred bloodletting will not suffice. It must be practised, as in other cases of acute inflammation, so as to produce a marked impression on the circulation, while the quantity drawn must be so considerable as to make it probable that the impression will be permanent. On all occasions I have found it necessary to bleed, whatever was the age of the patient, to complete relaxation. The bleeding, when thus practised, is immediately followed by diminution of the heat of the body, of the force and frequency of the pulse, and of the headache and sore throat; and the eruption entirely disappears, and in many cases scarcely again becomes visible. While the blood yet flowed, many patients have expressed in strong terms the relief they enjoyed."

"Of late, Mr. D. has bled all persons who have passed the period of mere infancy in the horizontal posture

and when he has obtained what he considers a proper quantity of blood, he raised them into the erect posture till relaxation took place.

Although the commencement of this eruption is, without doubt, the time at which blood-letting can be practised with the greatest confidence of success, yet, while the pulse continues strong, and there is reason to believe that effusion has not taken place into the head, he does not hesitate to bleed, and has never had reason to regret it."

He invariably bled the patient until the eruption *disappeared*; and states that "the recoveries were uniformly rapid—and, it is gratifying to add, that I have not had even the approximation to a dropsical symptom." To sum up, if the lancet be used early, and to an insufficient extent, it will diminish the strength of the patient, without lessening the force of the fever; and if delayed too long, it will accelerate the effusion into the head." If on the other hand, it is practiced at the proper time, and to a sufficient extent, it will prove a means of cure, safe and successful, far beyond any other.

Such purgatives as are recommended in the treatment of bilious fever, should be used throughout the whole course of this disease, of whatever grade it may be. Two or three evacuations should be obtained every twenty-four hours. Their use is not to be abandoned on the appearance of diarrhœa; for they will more certainly correct the cause giving rise to it than any other means. Mercurial purges are the best. Dr. Armstrong says, "It is somewhat remarkable, that calomel, though given in large and frequent doses, will hardly ever produce ptyalism (salivation) in scarlatina." He states that he has frequently given from six to eight grains of this article to children, twice, thrice, and even four times daily, without having, in a single instance, known it to produce salivation. He considers it the best purgative in every variety of the disease.

Cold water applied to the surface of the body by affusion or sponging, cannot be too highly recommended in high grades of this disease. Dr. Bateman says, "We

are possessed of no physical agent, as far as my experience has taught me, (not excepting even the use of blood-letting in acute inflammation,) by which the functions of the animal economy are controlled with so much certainty, safety, and promptitude, as by the application of cold water to the skin, under the augmented heat of scarlatina and of some other fevers.— It is in fact the only sudorific or anodyne that will not disappoint the expectation of the practitioner under these circumstances. I have had the satisfaction, in numerous instances, of witnessing the immediate improvement in the symptoms, and the rapid change produced in the countenance of the patient, produced by washing the skin. Invariably, in the course of a few minutes, the pulse has been diminished in frequency, the thirst abated, the tongue has become moist, a general free perspiration has broken forth, the skin has become soft and cool, and the eyes have brightened; and these indications of relief have been speedily followed by a calm and refreshing sleep.” When the arterial reaction is violent, the water should be poured or dashed over the body; where this is impracticable, washing or sponging the surface will answer. Vinegar may be added to the water, when the heat is very intense. Where there are evidences of internal inflammation, the warm bath may be occasionally resorted to with advantage.

Emetics are useful in the beginning of the disease, when there is much nausea present. They are particularly valuable, however, in cases attended with affection of the throat. A single emetic of ipecac. will often subdue the inflammation as by a charm, and enable the patient to breathe and swallow with ease. They may be repeated as often as the swelling of the tonsils may seem to demand. A tea made of red pepper is another very important remedy for the sore throat. It is made by taking two table-spoonfuls of common red pepper, (or a tea-spoonful of cayenne pepper,) and two tea-spoonfuls of fine salt, and after beating them into a paste, pour upon them half a pint of boiling water; then strain it, and add half a pint of good vinegar.—

An adult may take a table-spoonful of tea every half hour; and frequently gargle the throat with it. It will never fail to afford relief, if persevered in. I have seen very violent cases of sore throat relieved by this tea alone. For detaching the sloughs and healing the ulcers, a very weak solution of blue vitriol may be used. It should be applied to the parts by means of a small mop, care being taken not to touch any part of the mouth or throat which is not ulcerated. Diluted muriatic acid and honey are recommended to be made into a gargle for the same purpose, and used at discretion. When the inflammation of the throat is very great, much relief may be obtained from blisters, applied so as to reach from one ear to the other. The discharge from the blistered surface must be kept up as long as possible.—The inhalation of various kinds of vapor may often be resorted to with advantage. (See Peripneumonia Notha.)

When collapse supervenes, the system should be supported by gentle stimulants, as wine-whey, weak solutions of the muriate or carbonate of ammonia, and camphor. The patient should be confined to a milk diet, and perfect quietude enjoined.

In the stage of excitement, cooling drinks, acidulated with lemon juice or elixir vitriol, may be freely allowed; but in the latter stages, catnip, balm, or bonset, are preferable.

During convalescence, a light, digestible and unirritating diet, should be strictly adhered to.

When dropsical symptoms appear after this disease, they are generally the result of not keeping the bowels open throughout the progress of the complaint. When they occur, the disease is to be treated as directed under the head of *Dropsy*.

Small doses of belladonna are said to be an effectual preventative of scarlatina. Dissolve three grains of the extract of belladonna in one ounce of cinnamon water, and give it in doses of from one to three drops to children under one year old, and add one drop more for every year above this age.

The patient should be accommodated with frequent



changes of linen and bedclothes, and his chamber kept freely ventilated.]

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ERYSIPELAS.—ST. ANTHONY'S FIRE.

This disease attacks persons at any period of life, but is most common between the ages of thirty and forty.—Persons of a sanguine or plethoric habit are most liable to it. It often attacks young people, and pregnant women; and such as have been afflicted with it are very liable to have it again. Sometimes it is a primary disease, and at other times only a symptom of some other malady. Every part of the body is liable to be attacked by erysipelas, but it most frequently appears on the legs or face, especially the latter. It is most common in autumn, or when hot weather is succeeded by cold and wet.

*Causes.*—Mental emotions; exposure of the body to cold when much heated by previous exercises; the intemperate use of alcoholic liquors; vicissitudes of the weather; suppression of accustomed evacuations; impure air: high living; hereditary predisposition.

*Symptoms.*—Erysipelas attacks with a shivering, thirst, loss of strength, pain in the head and back, heat, restlessness, and a quick pulse; to which may be added vomiting, and sometimes delirium. On the second, third, or fourth day, the part swells, becomes red, and small pustules appear; at which time the fever generally abates.

When it attacks the face, it swells, appears red, and the skin is covered with small pustules filled with clear water. One or both eyes are generally closed with swelling; there is inflammation of the throat, and difficulty of breathing and swallowing. If the mouth and nostrils be very dry, and the patient drowsy, there is reason to suspect inflammation of the brain.

If the erysipelas affects the breast, it swells and be-

comes exceedingly hard, with great pain, and is apt to suppurate. There is a violent pain in the arm-pit on the side affected, where an abscess is often formed.

If in a day or two the swelling subsides, the heat and pain abate, the inflamed part turns yellow, and the cuticle breaks and falls off in scales, the danger is over.

The event of this disease depends greatly upon the constitution of the patient. It is seldom dangerous; but when the constitution is feeble, the legs will sometimes swell to a prodigious size, and the cure prove extremely difficult. It has often proved fatal to people in the decline of life, who were of a scorbutic habit.

When the erysipelas is large, deep, and affects a very sensible part of the body, the danger is great. If the red color changes into a livid or black, it will end in a mortification. Sometimes the inflammation cannot be discussed, but comes to suppuration; in which case fistulæ, gangrene, or mortification, often ensue.

Such as die of this disease are commonly carried off by the fever, which is attended with difficulty of breathing, and sometimes with delirium and great drowsiness. They generally die about the seventh or eighth day.

*Regimen.*—In erysipelas the patient must neither be kept too hot nor too cold, as either of these extremes tend to make it retreat, which is always to be guarded against. When the disease is mild, it will be sufficient to keep the patient within doors, without confining him to his bed, and, to promote perspiration by diluting liquors.

The diet ought to be slender, and of a moderately cooling and moistening quality, as gruel, panado, chicken or barley broth, with cooling herbs and fruits, avoiding flesh, fish, strong drink, spices, pickles, and all other things of a heating nature:—the drink may be barley-water, an infusion of elder-flowers, common whey, and such like.

*Treatment.*—The treatment of idiopathic\* erysipe-

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\* A primary disease, arising spontaneously, and not as a symptom of any other, when it would be termed symptomatic erysipelas.

las varies according to the causes, symptoms, complications, and anomalies of the disease, and may be divided into internal and external. That the mode of relief must be very different in phlegmonous erysipelas from what it is in other varieties of this disorder, must be plain to every one who has the least knowledge of diseases in general.

“Common cases of *acute*, or phlegmonous, erysipelas, yield to mild purgatives, and a light vegetable diet, with which remedies practitioners usually conjoin diaphoretics and the saline mixture. Whether bleeding is right, or not, in this species of erysipelas, is a point on which different sentiments prevail. In the milder forms of the disease venesections are pretty generally dispensed with. Nor is it necessary to repeat bleeding, in any case of erysipelas, so frequently as is done in other inflammatory disorders. As regards this, however, we must be guided by the state of the pulse, and other symptoms, never forgetting the patient’s age, strength, &c. *Cæteris paribus*, the patient will bear bleeding better in the country than in a large city, and especially in an hospital; and, as has been truly remarked unless there be considerable tendency to delirium and coma, blood-letting can seldom be advantageously repeated. Instead of this practice, Dr. Bateman judiciously recommends local bleeding and blistering, but not upon, or very near the diseased surface, whereby he avoids producing the troublesome sores, the frequency of which in former times, after taking blood from erysipelatous, led Mr. B. Bell to pronounce a general condemnation of the method.”

In this disease much mischief is often done by external applications. People, when they see an inflammation, immediately think that something ought to be applied to it. This, indeed, is necessary in large phlegmons, or boils; but in erysipelas the safer course is to apply nothing. Almost all ointments, salves, and plasters, being of a greasy nature, tend rather to obstruct and repel, than promote any discharge from the part. At the beginning of this disease, it is neither safe to promote suppuration, nor to repel the matter too quick-

ly. The erysipelas, in many respects, resembles the gout, and is to be treated with the greatest caution.—Fine wool, or very soft flannel, are the safest applications to the part. These not only defend it from the external air, but likewise promote perspiration, which has a great tendency to carry off the disease.

[After the inflammatory symptoms are in a measure subdued, emetics will often exercise a powerful influence over the disease. They are particularly applicable in cases where the antiphlogistic treatment cannot be carried to greater extent without danger, and the disease still remains unsubdued.]

If the fever be high, the pulse hard and strong, and the patient vigorous, it will be proper to bleed; but the quantity must be regulated by these circumstances, and the operation repeated as the symptoms may require. If the patient has been accustomed to strong liquors, and the disease attacks his head, bleeding is absolutely necessary.

Bathing the feet and legs frequently in lukewarm water, when the disease attacks the face or brain, has an excellent effect. It tends to make a deviation from the head, and seldom fails to relieve the patient. When bathing proves ineffectual, poultices or sinapisms may be applied to the soles of the feet, for the same purpose.

In cases where bleeding is requisite, it is likewise necessary to keep the body open. This may be effected by the daily administration of such purgatives as are recommended in the treatment of fevers generally. Some recommend very large doses of nitre in the erysipelas; but nitre seldom sits easy on the stomach when taken in large doses. It is, however, one of the best medicines when the fever and inflammation run high. Half a drachm of it, with four or five grains of rhubarb, may be taken in the patient's ordinary drink, three or four times a-day.

When the erysipelas leaves the extremities, and seizes the head, so as to occasion a delirium or stupor, it is absolutely necessary to open the body. If mild purgatives fail to have this effect, stronger ones must be given. Blisters must likewise be applied to the neck,



or behind the ears, and cataplasms laid to the soles of the feet.

When the inflammation cannot be discussed, and the part has a tendency to ulcerate, it will then be proper to promote suppuration, which may be done by the application of ripening poultices with saffron, warm fomentations, and such like.

Such as are liable to frequent attacks of erysipelas ought carefully to guard against all violent passions, to abstain from strong liquors, and all fat, viscid, and highly nourishing food. They should likewise take sufficient exercise, carefully avoiding the extremes of heat or cold. Their food should consist chiefly of milk, and such fruits, herbs, and roots, as are of a cooling quality, and their drink ought to be whey, butter milk, and such like. They should never suffer themselves to be costive. If that cannot be prevented by suitable diet, it will be proper to take frequently a dose of rhubarb, or some other mild purgative.

[In all the forms of erysipelas, except the phlegmonous, warm water is the most safe, effectual, and grateful application that can be made. It should be freely used when the skin is dry and parched, accompanied with great heat. But neither cold nor warm water are admissible when the skin is moist. In the phlegmonoid form, rubbing the parts frequently with rye-meal or starch, will generally give relief.]

["Several late English writers recommend making incisions through the inflamed skin and subjacent adipose and cellular textures. Mr. Lawrence, who strongly recommends this practice, asserts that "these incisions are followed, very quickly, and sometimes almost instantaneously, by relief, and cessation of the pain and tension;" and a corresponding declension of the inflammation almost always takes place. Mr. Hutchinson also speaks decidedly in favor of making incisions into the erysipelatous surface. Mr. Lawrence recommends making one free incision, extending from one boundary to the other, through the centre of the inflamed part. Mr. Dobson, who likewise advocates this practice in a

modified, form, advises a great number of punctures to be made, at a short distance from each other, over the whole disk of the affected part. "The practice of making incisions in phlegmonous erysipelas," says Mr. Plymsol of Glasgow, "has been established in the Royal Infirmary for the last four or five years, and has invariably proved successful; long incisions are generally preferred."]

As the erysipelas resembles the gout in many respects, it ought not to be rashly tampered with. Should it be driven from the part affected, it may fix upon a more dangerous one. The alarm is generally greatest when it removes to or attacks the face. I have, however, known it seize upon the knee, and after laying the bones bare, prove fatal. There is a peculiar species of Erysipelas in this country termed Shingles, (*Erysipelas phlyctænodes*,) and by the ancients Zona or Zoster, from surrounding the trunk of the body like a belt. It consists of an aggregation of vesicles filled with a limpid or yellowish colored fluid. The eruption makes its first appearance on some spot of the chest, and gradually extends laterally both ways. It is a vulgar, but unfounded opinion, that if the extremities of the eruption meet so as completely to surround the body, the patient must die. As this complaint seems often to be critical, we should not be too eager to repel it by externals. If the eruption suddenly subside, or be driven in by external applications, a paroxysm of asthma is not unfrequently the consequence. To remove this metastasis, stimulant applications are requisite, such as the ointment of yellow resin with an eighth part of the red precipitate, or the citrine ointment, by which the inflammation of the skin is reproduced, and the discharge kept up. The general treatment of this complaint consists in keeping the patient moderately warm, and giving tepid diluent fluids, till the vesicles begin spontaneously to dry. Their desiccation may be promoted by a lotion composed of a drachm of white vitriol dissolved in eight ounces of rose water. The common people are in the habit of applying to the shingles, writing ink dilu-

ted with water. After the eruption is scaled off, the patient should take a few doses of some cooling purgative.

For the erysipelas appearing in children, see *Infantile Erysipelas*.

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## WINTER FEVER.

Under this appellation are comprehended Pneumonia, Remittent fever, and Typhoid Remittent fever.—The reason why the three diseases are embraced under the cognomen of Winter Fever, is because they are so frequently blended together in the same case. The Pneumonia running into Remittent fever, and thence down to Typhoid Remittent fever; and vice versa, the Remitting fever commencing first, and the lungs sympathising with and putting on the livery of Pneumonia; the former being primary, and the latter the consequence.

And again, the Remittent fever will become Typhoid without the lungs becoming involved in the form of Pneumonia. And it is difficult and absolutely impossible to treat the disease separately; for it is that distinct method of treating them under their separate names that frequently causes the physician to mistreat the disease under its complication, looking to one or the other as the case may be, and directing the treatment accordingly, overlooking the symptoms that may have arisen. And it is not uncommon for it to commence with remittent fever, and terminate with Pneumonia, the latter as the consequence of the former. And sometimes it is the case that, the one which commences first, maintains its distinct characters throughout. And from the manifestations of bilious symptoms in those cases, which might justify the title of bilious inflammatory fever, we have been led to the conclusion that there is a miasm generated from the low grounds and high land ponds during the winter, as we have spells of warm weather

during the winter months, sufficient to produce it; and we are inclined to the belief that the decomposition of vegetable matter will go on under a much lower temperature than is generally supposed; from the fact, that the summer and autumnal impress of the former year will not account satisfactorily for the occurrence of these cases. Because the unacclimated, as well as the acclimated citizens, have these diseases separately and collectively; and we have all the periodicity conformable to the different grades of bilious fever of the country, and the same organs affected. Observation has settled the opinion that most diseases, unless they are the fixed diseases, such as contagious and infectious, will put on the type of the diseases incident to the country in which they occur. But it is the type merely, without the ordinary symptoms and organic lesions, incident upon those diseases.

In this winter fever, (so called from being confined to the winter and spring months entirely,) the symptoms and organic lesions are found to exist as in the summer and autumnal bilious fevers. And we cannot entertain a doubt but that the same causes that produce bilious fever are blended in this form of fever, and the treatment must conform to it accordingly. Neither can we doubt the low temperature of the season is insufficient to account for this complication of diseases, independent of malaria.

And we are induced to believe from thirteen years of experience and observation in this disease, that malaria is the basis or remote cause of this disease. The first case that we were ever called to treat occurred upon the margin of the Forked Deer bottom in the year 1834, in December; and from that period up to the present, more or less of it occurs every winter.

It commences about the first of December, and closes about the first or last of May. And the disease seems to be confined to the South-Western States where the inflammatory diseases terminate, and the bilious commences; and in consequence of which, the two are blended in the form of this winter fever peculiar to the climate.



The febrile symptoms are preceded by a chill, from one to two hours long, usually of a morning, and a hot stage succeeding, and continuing until the following morning, at which time there is a remission, which continues until the next morning, and then another chill supervenes; and as the disease advances, the chill diminishes until it can barely be perceived by the hands, feet and nose getting a little cold. The fever subsequently rising and continuing its violence for sometime after. In this form of the disease, the tongue is elongated, red on the edges and tip, the papilla and a white fur upon its root extending to the centre; tenderness over the region of the stomach, extending frequently into the right and left hypocondria, pain in the back and head during the febrile stage; the pulse is generally frequent, corded and small, from 90 to 120 in a minute, which indicates an inflammatory condition of the system, and from the symptoms previously stated we must readily infer that there is gastro enteritis, (inflammation of the stomach and bowels.)

*The Pneumonic form of the disease.*—The individual for several days previous to being taken down, feels languid, weak and indifferent to exercise, loss of appetite, slight cough as the initiatory symptoms of bad cold, slight head-ache, pain and weakness in the small of the back, and after the disease fully develops itself, the following symptoms occur: a chill intervening from one to two hours long, usually taking place in the morning, followed by fever, continuing through the balance of the day and part of the night; after midnight a remission sets in, and continues until about nine o'clock in the morning, and then another paroxysm sets in, as before, and runs the same round of time; but this paroxysm is not so severe as the first and the third, there being an imperfect paroxysm every other day, almost bordering upon an intermission, and the fever putting on the tertian type. The cough is severe and difficult, and no expectoration, except a little frothy mucous; sometimes pain in the chest, but it is not always a usual symptom, as there are many cases in

which there is no pain; particularly when the disease does not reach the pleuras or lining membranes of the chest, which may be known by the substance of the lungs being free from pain, redness on one or both cheeks, alternating pain in the head, high fever, pulse full and strong, hard and tense, about 80 or 90 in adult; younger persons from 120 to 140 in a minute; restless and chilly during the hot stages, requiring the clothing to be tucked close around them.

In this form of the disease the tongue does not indicate any deranged state of the system; it usually looks well, no redness about the edges, but flat, broad and moist; all the digestive functions seem to move on healthily; but in about ten or twelve days after *these symptoms*, the stomach and bowels begin to take the disease, manifested by thirst, red, dry, pointed tongue with a dry red streak through the middle of it; papula raised, sleeplessness comes on as the disease advances, with a dull head-ache, drowsy, laying with the eyes most always shut; hard to rouse them for any thing you have need to give them.

Tenderness over the region of the stomach, sometimes pain in the right hypochondriac region; tenderness upon pressure over the abdomen; but this is not always an accompanying symptom, Diarrhœa is not uncommon; but when costiveness occurs the case is more favorable, urine high colored and sometimes difficult of discharge in consequence of the constricted state of the ureters from the irritating effects of the urine itself.

The treatment in this form of the disease we deem it proper to lay down before we proceed to the other forms of the disease, as we shall lay them down separately, as well as their treatment.

Bleeding in this form of the disease, both general and local, is the sheet-anchor, or, main dependence; it reduces the reaction, and modifies for the better, the pulse: the amount of blood by venesection will depend entirely upon the excitement, strength and condition of the pulse.

After general blood-letting has been premised, and pulse and excitement having yielded, and the pain in

the chest continuing, cupping over the region of the pain will be necessary, and warm poultices of mush, herbs, or scalded oats put into a bag and laid over the breast, and renewed frequently when they get cold, are good and soothing, and serve to obstruct pain, and excite moisture upon the skin.

In this stage of the disease tartarized antimony, about one-fourth of a grain, put into a half pint tumbler of cold water, a table-spoonful of which given every hour if the stomach will bear it, during the exasperation, is very useful, as it relaxes the skin, and moderates the febrile symptoms; and when there is no Diarrhœa present, but an opposite tendency of the bowels, there is nothing better.

As to the state of the bowels in this form of the disease, it is not necessary to disturb them by any purgative or laxative medicines; for the inclination of the bowels to take on the disease is so great, that every thing should be avoided that tends to produce that result. Anodines; there is no class of medicines that occupy a higher rank in the treatment of this form of the disease than anodines. Opium in some form or other administered, is absolutely necessary, both in the incipient stage, and afterwards through the whole course of the disease; and wherever it fails to produce a salutary effect, bleeding is indicated and should be resorted to.

The brown mixture as an expectorant; we have seen very happy results from its use, composed as follows: four drachms. each of liquorice gum, and gum arabic, dissolved in four ounces of hot water, to which add a half an ounce of laudanum; a tea-spoonful given at intervals of an hour or two, whenever the cough is troublesome, has a very fine effect.

After the disease has modified itself by its location upon the stomach and bowels in the form of gastro enteritis, as the red and dry pointed tongue, intense thirst, with frequent small tense pulse, indicate the treatment then must be directed towards that object, cupping over the stomach and abdomen; and after you have accomplished all you can do in that way, blisters over

the same parts, are advisable, and we have found poultices, also, to be beneficial.

As to the internal remedial means in this form of the disease, there is no point of treatment about which there is more difference of opinion.

Some physicians are for keeping the bowels freely open with laxatives and purgatives, and some are in favor of moving the bowels but seldom, and only when the accumulation becomes a source of irritation, and then a purgative to be used to carry them off.

As for our part we are inclined to the latter plan, as we think the more seldom the bowels can be moved to avoid accumulations, so as to guard against irritations, the better; as moving the bowels frequently, increases and keeps up the inflammations already established there, and we have rarely seen any good results arise from that course of treatment.

And there is even a difference yet remaining, as to the mode of purgation. Some are for giving calomel and Dover's powders, two grains of the former, and one of the latter every two hours, until the bowels are freely opened.

Our objection to this course, is this: that you increase the vermicular motion of the bowels too much, and the small particles trickling down the bowels, each one having an action of itself, and the stools corresponding to the dose, and unnecessarily harrassing and weakening to the patient, and each dose leaving its trace of irritation behind, doing more harm than good.

Our plan is to give, what is to be given, at once, and be done with it, and let the patient rest; besides, the passages are more apt to be bilious and consistent, than in the minute portions; the latter is apt to produce watery evacuations, and do no good; and when diarrhœa intervenes, the medicine in broken doses is inadmissible, for it only aggravates the disease.

From fifteen to twenty, and sometimes thirty grains of calomel, combined with two grains of opium-pulvis, are given, particularly when the diarrhœa has set in, as it seems, from our views of the case, that the want of action upon the liver is the cause of diarrhœa, and we



find, as soon as you establish a healthy secretion from the liver, all the symptoms of diarrhœa and gastro enteritis, gradually disappear; and our experience sustains us in the opinion, that the consistent and healthy evacuations cannot be established in any other way.

Some are for letting the bowels rest, and leave them to themselves; but that will not do, for they never will correct themselves. Gum Arabic water is a very fine mucilaginous drink, in combination with lemon acid or syrup.

The use of quinine has been a great deal lauded and highly approved of in this disease; we have, in some instances, found beneficial results in its use; and whenever it is admissable, it is in the latter stage, when the inflammatory symptoms have all subsided.

*Symptoms.*—The Pneumonic form of the disease having been treated upon, we come now to lay down the symptoms of the Remittent form of the disease.—It puts on all the livery of remittent bilious fever, common to our climate; the only striking difference is, the inflammatory characteristic symptoms blended with it, or superadded, rendering the disease more complex and difficult of treatment, making it slow and tardy.

The individual, for some days previous to the attack, has the following premonitory symptoms; languid, drowsy and listless feeling, restless and nervous, pain in the loins and limbs, slight uneasiness in the head, without much disposition to sleep, want of appetite.

Then a chill supervenes with more or less intensity, succeeded by a fever, and for the first few exacerbations, very high, then more mild. The chill usually comes on in the morning, lasting for an hour or so, the fever then rising, varying in its intensity until after midnight, and then a remission takes place, and the individual feels somewhat relieved for a few hours, until the same round of symptoms return, pain in the loins and limbs, restlessness, thirst intense, pulse full, strong and quick, not more than 80 or 90 in an adult, but as the disease advances, they become frequent, corded and small, from 90 to 120 in a minute, nausea accompanied,

occasionally, with bilious vomiting, tongue dry, elongated, red at the tip and round the edges, and as the disease advances, becomes red all over, contracted and cracked open, furred, first yellowish, then black, and cannot be protruded until it is moistened; urine high colored.

In this stage of the disease, blood-letting in amount, agreeable to the violence of reaction, and the strength of the pulse, is necessary; emetics are very useful, in the first paroxysms, after blood-letting is resorted to; particularly during the remission; they break down the violence of the disease, and give a shock and modify it for the better.

Purgatives are highly useful when indicated by accumulations in the stomach and bowels, or when the liver is inactive and requires to be emulged. From 12 to 20 grains of calomel, combined with 2 grains of Dover's powders for an adult, is what is commonly used; for the reason, that if you give it in smaller doses, or in broken doses, you are apt to produce watery stools, and annoy the patient and do no good, and frequently bring on diarrhœa, that could have been avoided.

The frequency with which you give the purgatives, depends upon the accumulations that take place, but at as long intervals as possible, for the reason, that the frequent purging sets up irritation, that aggravates the symptoms of the disease.

After this stage of the disease runs on for ten or fifteen days, if convalescence do not take place, typhoid symptoms supervene, and subsequent to these, irritation of the lungs begin to manifest themselves, and are the last symptoms to leave the patient, up to convalescence, and harrass the patient for months afterwards.

Head-ache, pain in one temple, and sometimes both, sleeplessness, and coma, frequent small corded pulse, thirst great, tenderness over the stomach, and sometimes, bowels, difficulty in urinating, high coloured urine, fœted stools, and frequent diarrhœa supervenes, and unless early arrested, carries off the patient.

The treatment in this stage of the disease, can only be palliative, as you have to rely more upon the ener-

gies of nature than art; blistering over the stomach and abdomen, are absolutely necessary, for inflammation resides there; mucilaginous drinks are indispensable, to defend the bowels against feculent matter. Ptisans of sage, balm, hysop and camomile, provided the bowels are not disposed to run off, are useful; occasionally when the bowels want moving, calomel and Dover's powders given as a purgative, is better than any thing else. Blisters to the back of the neck and spine, when the brain is much affected, are indispensable; dieting with faranacious articles; time and patience in this form of the disease, are more to be relied upon than remedial means.

Whenever the lungs become involved in this form of the disease, it is indicated by a dry cough and flushed cheek, or cheeks, changing from one to the other, without any pain manifested in the chest.

The Brown Mixture, mentioned in the Pneumonic form of the disease, given in such quantities as to quiet the irritation of the Bronchia, will be of great service. Small quantities of tartar emetic, one-fourth of a grain in a half pint of cold water, to be given in table-spoonful doses every hour or two through the day, while the fever is up, will be beneficial, unless it runs off on the bowels, in that case, it would be injurious.

Quinine we have used in all three forms of this disease with signal success, when the individual will bear it, and large doses are preferable, combined with some preparation of opium, to small ones.

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## BLEEDING AT THE NOSE.

IN febrile diseases, accompanied with pain in the head, flushed countenance, and redness of the eyes, bleeding from the nose in general is salutary, and ought not to be checked, unless the patient is likely to be too much exhausted by it—However, when this discharge is too profuse, the patient should have his head raised and exposed to the cool air. Besides which, cold

acidulated drinks should be used, and the patient should rather immerse his head in very cold water, or have cloths dipped in cold vinegar and water frequently applied to the nostrils, face and back of the neck. A piece of metal, as a key for example, applied cold to the naked back, is a familiar remedy, and often succeeds. If these should not prove sufficient, a pledget of lint dipt in strong alumwater, or a powder composed of flour and alum of equal quantity, should be introduced into the nostrils, with sufficient force to compress the orifice of the ruptured vessels. In addition to these means, give a dose of Epsom or Glauber salts, to evacuate the bowels, and from ten to twenty grains of nitre every hour or two, in a glass of cold water. Immersing the feet in warm water while the cold applications are continued to the head, will also be found beneficial.

One of the most powerful styptics which we can use, says Dr. Thomas, is powder of charcoal. It may be applied by means of tents, first moistened with water, and then dipped in this powder; but in slight cases, it will answer by being taken like snuff.

After the bleeding has ceased, the patient must be careful not to remove the tents of clotted blood, but should allow them to come away of themselves.

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### SPITTING OF BLOOD.

When there is a discharge from the mouth, of blood of a florid color, brought up with more or less coughing, preceded by a sense of tightness, weight, and anxiety in the chest, and attended with a saltish taste of the spittle, it is in consequence of a ruptured vessel of the lungs.

*Cause.*—Plethora: violent exercise of the lungs; and, frequently, mal-conformation of the chest.

*Treatment.*—The most important remedy in this



alarming complaint, is blood-letting, which should be actively employed, paying, at the same time, attention to the state of the bowels. Spitting of blood, however, is sometimes owing to the contraction of the chest with debility; and in this case, the lancet must not be so freely used.

Sedatives, particularly those which repress the activity of the circulation, are highly useful. Of these, the chief are nitre and foxglove. Nitre, in doses of ten grains, given every hour, in the coldest water, and swallowed while dissolving, is much to be depended on in the early stage of this disorder. The tincture of foxglove exhibited in small doses every hour or two, by retarding the action of the pulse, will also prove a most useful auxiliary in suppressing pulmonic hemorrhages, particularly in those cases where an inflammatory diathesis prevails. Whenever there is fixed pain in the chest, a blister applied to the breast or back will do much service.

According to Dr. Rush, two tea-spoonsful of common salt, dissolved in a small quantity of water, and exhibited every two hours, or oftener, will check this disease, as well as hemorrhages from the stomach and uterus.

Astringents are frequently resorted to, as alum, kino, and sugar of lead; but they are of little utility, except in the passive hæmoptyses, and even in these, nitre is often found preferable.

If the cough be troublesome, it will be necessary to have recourse to demulcents and pectorals, as advised under the head of cold. Sometimes a spitting of blood is produced in consequence of suppressed evacuation; in this case, it is not dangerous, and only requires remedies to restore the customary discharge.

A spitting of blood may readily be distinguished from a discharge of it from the stomach, as, in the latter, the quantity is usually more considerable, of a darker color, and is generally unattended by coughing.

*Regimen.*—A low diet should be strictly observed, and the body kept as quiet as possible. Nothing should

be taken warm; flax-seed tea, barley or rice-water, acidulated with the juice of lemons or elixir vitriol, ought to be used as common drinks, and taken as cold as possible.

*Prevention.*—Carefully avoid all exertions which either detain or hurry the blood in its passage through the lungs, as singing, loud speaking, running, or lifting great weights. Obviate costiveness, by the occasional use of mild aperients, and use a spare diet. On experiencing any pain in the chest, blister, bleed, and constantly wear flannel next to the skin.

Swinging, sailing, travelling in an easy carriage, and riding on horseback, will be the most appropriate exercise.

## INCONTINENCE OF URINE.

*Symptoms.*—An involuntary evacuation of urine.

*Causes.*—A relaxation of the sphincter of the bladder; injuries received about the neck of the bladder; pressure of the womb in a state of pregnancy, &c.

*Treatment.*—When the disease proceeds from a relaxation of the sphincter of the bladder; a large blister to the *os sacrum*, or lower part of the back-bone, will be found highly beneficial, and often effects a cure in one or two days.

The uva ursi, given from twenty to sixty grains at a time, three times a day, has been used with good effect.

The cold bath, or dashing cold water upon the genitals, and tonic medicines, as the nitric acid, lime-water, bark, steel, and Columbo, are peculiarly proper in obstinate cases of this kind. The tincture of cantharides, in doses of ten or twelve drops, every three or four hours, is said, by Dr. Morton, to be a specific in this complaint. Others recommend alum whey, made as strong as the stomach will bear it, and direct half a

pint to be taken night and morning. With others, the blue vitriol, in doses of half a grain, given twice a day in any agreeable liquor, is most to be depended on.—The occasional use of rhubarb, in small doses, to keep the bowels easy, tends greatly to alleviate the affection. When it is produced by an impregnated womb, little more can be done than observing a horizontal position as much as possible.

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## DIFFICULTY OF URINE.

When there are frequent uneasy urgings to avoid urine, and it is discharged with difficulty and pain, the disease is called a *strangury*; and when it is totally retained, is called a *suppression of urine*.

*Causes.*—It arises from a variety of causes, as calculous concretions; obstructions in the urethra; blisters; or the tincture of cantharides, taken internally too freely; wounds, bruises, &c.

*Treatment.*—The cure must greatly depend on the cause. If the pulse be full and feverish, bleed and procure stools by emollient clysters and cooling laxatives, such as castor oil, or the cathartic mixture. (*See Dispensatory.*) Much dependence is to be placed in the free use of demulcent drinks, as barley-water, flax-seed tea, mucilage of gum Arabic, decoction of marsh-mallows, of parsley-roots, or of watermelon seeds, especially if the affection be owing to the cantharides, or any injury of the bladder. One of the camphorated powders, (*see Dispensatory,*) given every three or four hours, in the patient's common drink, often effects a cure. Great relief will be obtained from the warm bath, used oftener or seldomer as the case may require, or sitting in a tub of warm water, or from the frequent applications to the belly, of cloths wrung out of hot

water, or bladders half filled with it. Opiates are very servicable, but should never be used in the height of fever.

A starch clyster, with laudanum, has very frequently given immediate relief. Cooling laxatives and diuretics, which operate without any stimulus, particularly the Epsom or Glauber salts, as in the form of the cathartic mixture, often relieve. As a diuretic, the following mixture is considered most salutary, 'Take, of sweet spirits of nitre, one ounce, laudanum and antimonial wine, each, two drachms, a tablespoonful of which may be given in some diluent drink, and half this quantity repeated every hour, if necessary.

In the chronic strangury, after other means have failed, the use of calomel in small doses, or mercurial ointment rubbed into the thighs every night till a slight ptyalism ensues, has frequently effected a permanent cure. In such cases an affection of the prostrate gland may be suspected to have been the cause. Walking on a cold wet floor, perhaps dashing water against the legs and thighs, would, in obstinate cases, succeed in producing a discharge of urine, as it has done the fæces. When a suppression of urine arises from partial palsy, as frequently occurs in the old and debilitated constitutions, our best chance of success, in giving temporary relief, is to give the spirits of turpentine in pretty large doses, make use of general stimulants, and apply a large blister to the loins.

When this complaint is in consequence of calculous concretions or gravel obstructing the urinary passages, which may be known by pain in the loins, sickness at the stomach, and sometimes a discharge of bloody urine, an infusion of wild carrot-seed, sweetened with honey, as also the infusion of peach leaves, (*see Materia Medica*,) have been found exceedingly beneficial. The infusion of hops, which is considered a solvent of the stone, administered in doses of a wine glassful, and taken to the quantity of a pint daily, is said to be an excellent remedy in calculous affections. The uva ursi is likewise celebrated as a remedy in cases of gravel, in



doses of five grains with half a grain of opium, thrice a day. A more powerful medicine, however; for gravel complaints, is the caustic alkali, or soapless, (*see Dispensatory*,) but, being of an acrid nature, it ought always to be given in mucilaginous drinks, and commenced with small doses, which should be gradually increased as far as the stomach can bear, and continued for a long time, particularly if there should be an abatement in the symptoms.

When great pain attends a suppression of urine, and the bladder is full, which can be ascertained by feeling it above the *os pubis*, and on pressure creating pain in the neck of the bladder, or at the end of the penis, it will be necessary to have recourse to the catheter, or a hollow bougie for drawing off the water. The larger sizes of each are more easily introduced than the smaller, as they are not so liable to stop in the corrugations and foldings of the urethra, which occur in elderly men. It is easy to introduce the catheter into the female bladder, since the direction of the urethra is nearly straight; but in males there is greater difficulty. The celebrated Heister directs the man to lie on his back, and the operator to take the penis in his left hand as he stands on the patient's left side, reclining the penis towards the naval, then he is to introduce the catheter, thoroughly oiled, with its concave part to the belly, in the urethra, as far as the *os pubis*, and so thrusting it under the symphysis of those bones, and moving the hand gently outwards, forces it into the bladder.

In the following cases, this instrument cannot be used: When the neck of the bladder is greatly inflamed; when a scirrhusity or preternatural tumor of the prostate gland or stone obstructs the passage; when the uterus is remarkably prominent and pendulous over the pubes; or when the uterus is retroverted; in which state it drags the bladder upwards and backwards.

When the application of blisters causes a difficulty of urine, wash the blistered part frequently with warm milk and water, or apply sweet oil. In children, a suppression of urine is often relieved by a poultice of raw onions or radishes applied to the bottom of the belly.

*Regimen.*—During the violence of this complaint, the lightest diet only should be used, and mucilaginous drinks taken freely. Those who are often afflicted with it, ought carefully to avoid aliment hard of digestion, flatulent, or of a heating nature.

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### HEMORRHOIDS, OR PILES.

When there is a discharge of blood from the hemorrhoidal veins, it is called the *open* or *bleeding piles*; and when, instead of this hemorrhage, there are painful tumors at the lower part of the rectum, it is called the *blind piles*.

*Causes.*—Costiveness; strong aloetic purges; much riding; or sedentary habits.

*Treatment.*—If the patient be of a full habit, bleed, keep the bowels gently open with Epsom salts, the cathartic mixture, cream of tartar and sulphur or molasses and water; and avoid violent exercise, high-seasoned dishes, and every thing of a stimulating nature. Topical applications, as cloths wrung out of cold vinegar and water, or lead water, are also useful, and should not be omitted in either case. When the piles are of the bleeding sort, and will not readily yield to the above means, apply cloths dipped in charcoal powder, or in a strong solution of white vitriol or alum, frequently to the fundament, or anoint the part with the hemorrhoidal ointment, (*see Dispensatory*), and endeavor to restore the tone of the vessels by the use of bark, elixir vitriol, nitric acid, or tincture or rust of steel. When the disorder assumes a chronic form in the more advanced periods of life, or when the piles do not bleed, they are generally attended with considerable pain; in which case, dossils of lint dipped in olive oil may be applied, or olive oil with an equal portion of laudanum, may be spread on soft rags and retained by the Tubandage. In

addition to this mode of treatment, when the tumors are very painful, it is necessary to sit over the steam of hot water, which seldom fails to produce immediate relief. The poke-weed (see *Materia Medica*) has, in some instances, been employed with good effects. The balsam capaiva, in doses of a teaspoonful night and morning, is said to be useful in relieving the pain, and will sometimes effect a permanent cure. According to Dr. Thomas, the tincture of foxglove, given in pretty large and frequent doses, is a remedy both for the external and internal piles.

When the tumors will not yield to the external applications above recommended, anoint them night and morning with the mercurial ointment, to which may be added one-fourth opium.

If the blind piles encompass the anus so as to prevent the discharge by stool, and prove otherwise troublesome, the largest may be removed by a ligature. If the distend vein is high and inflamed, it may be opened with a lancet. When from long-continued piles a fistula is apprehended, *Ward's paste* is sometimes useful. It consists of a pound of Elecampane root, with half as much black pepper, and a pound and a half of fennel seeds, made into a paste with honey. Perhaps the remedy of the honorable John Taliaferro, for whitlow, might be useful in this case.

When the piles are apparently continued from relaxation, two drachms of the tincture of steel, with nearly the same quantity of laudanum, and four ounces of barley-water or thin starch may be injected as a clyster, morning and night.

**Prevention.**—Those who are subject to this distressing complaint, may be assured of preventing its recurrence, by keeping the bowels in a soluble state with the occasional use of sulphur at bed-time, by washing the fundament night and morning with the coldest water, and by making use of a sponge absorbed with cold water, after obeying the calls of nature.

## BLEEDING AND BLIND PILES.

A discharge of blood from the hemorrhoidal vessels is called the bleeding piles. When the vessels only swell, and discharge no blood, but are exceedingly painful, the disease is called the blind piles.

Persons of a loose spongy fibre, of a bulky size, who live high, and lead a sedentary inactive life, are most subject to this disease. It is often owing to a hereditary disposition. Where this is the case, it attacks persons more early in life than when it is accidental. Men are more liable to it than women, especially those of a sanguine plethoric habit, or of a melancholy disposition.

The piles may be occasioned by an excess of blood, by strong aloetic purges, high-seasoned food, drinking great quantities of sweet wines, the neglect of bleeding, or other customary evacuations, much riding, great costiveness, or any thing that occasions hard or difficult stools. Anger, grief, or other violent passions, will likewise occasion the piles. I have often known them brought on by cold, especially about the seat. A pair of thin breeches will excite the disorder in a person who is subject to it, and sometimes even in those who never had it before. Pregnant women are often afflicted with piles.

A flux of blood from the anus is not always to be treated as a disease. It is even more salutary than bleeding at the nose, and often prevents or carries off diseases. It is peculiarly beneficial in the gout, rheumatism, asthma, and hypochondrical complaints, and often proves critical in colics, and inflammatory fevers.

In the management of the patient, regard must be had to his habit of body, his age, strength and manner of living. A discharge which might be excessive and prove hurtful to one, may be very moderate, and even salutary to another. That only is to be esteemed dangerous which continues too long, and is in such quantity as to waste the patient's strength, hurt the digestion, nutrition, and other functions necessary to life.



When this is the case, the discharge must be checked by a proper regimen, and astringent medicines. The diet must be cool but nourishing, consisting chiefly of bread, milk, cooling vegetables and broths. The drink may be chalybeate-water, orange-whey, decoctions or infusions of the astringent and mucilaginous plants, as the tormentil-root, bistort, the marsh mellow-root, &c.

Old conserve of red roses is a very good medicine in this case. It may be mixed with new milk, and taken in the quantity of an ounce three or four times a day. This medicine is in no great repute, owing to its being seldom taken in such quantities as to produce any effect; but when taken as here directed, and only persisted in, I have known it perform very extraordinary cures in violent hemorrhages, especially when assisted by the tincture of roses; a tea-cupful of which may be taken about an hour after every dose of the conserve.

The Peruvian bark is likewise proper in this case, both as a strengthener and astringent; half a drachm of it may be taken in a glass of red wine, sharpened with a few drops of the elixir of vitriol, three or four times a day.

The bleeding piles are sometimes periodical, and return regularly once a month or once in three weeks. In this case they are always to be considered as a salutary discharge, and by no means to be stopped. Some have entirely ruined their health by stopping a periodical discharge of blood from the hemorrhoidal veins.

In the blind piles bleeding is generally of use. The diet must be light and thin, and the drink cool and diluting. It is likewise necessary that the body be kept gently open. This may be done by small doses of the flower of brimstone and cream of tartar. These may be mixed in equal quantities, and a tea-spoonful taken two or three times a day, or oftener if necessary. Or an ounce of the flower of brimstone and half an ounce of purified nitre may be mixed with three or four ounces of the lenitive electuary, and a tea-spoonful of it taken three or four times a day.

Emollient clysters are here likewise beneficial; but there is sometimes such an astriction of the anus, that

they cannot be thrown up. In this case I have known a vomit have a very good effect.

When the piles are exceedingly painful and swelled, but discharge nothing, the patient must sit over the steam of warm water. He may likewise apply a linen cloth dipped in warm spirits of wine to the part, or poultices made of bread and milk, or of leeks fried with butter. If these do not produce a discharge, and the piles appear, large leeches must be applied as near them as possible, or if they will fix upon the piles themselves, so much the better. When leeches will not fix, the piles may be opened with a lancet.

The operation is very easy, and is attended with no danger.

Various ointments, and other external applications are recommended in the piles; but I do not remember to have seen any effects from those worth mentioning. Their principal use is to keep the part moist, which may be done as well by a soft poultice, or an emollient cataplasm. When the pain, however, is very great, a liniment made of two ounces of emollient ointment, and half an ounce of liquid laudanum, beat up with the yolk of an egg, may be applied.

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#### BLOODY URINE.—HÆMATURIA.

This is a discharge of blood from the vessels of the kidneys or bladder, occasioned by their being either enlarged, broken, or eroded. It is more or less dangerous according to the different circumstances which attend it.

When pure blood is voided suddenly, without interruption and without pain, it proceeds from the kidneys; but if the blood be in small quantity, of a dark color, and emitted with heat and pain about the bottom of the belly, it proceeds from the bladder. When bloody urine is occasioned by a rough stone descending from the kidneys to the bladder, which wounds the *ureter*, it is

attended with a sharp pain in the back, and difficulty of making water. If the coats of the bladder are hurt by a stone, and the bloody urine follows, it is attended with the most acute pain, and a previous stoppage of urine.

Bloody urine may likewise be occasioned by falls, blows, the lifting or carrying heavy burdens, hard riding, or any violent exercise. It may also proceed from ulcers of the bladder, from a stone lodged in the kidneys, or from violent purges, or sharp diuretic medicines, especially cantharides.

Bloody urine is always attended with some degree of danger; but it is peculiarly so when mixed with purulent matter, as this shows an ulcer somewhere in the urinary passages. Sometimes this discharge proceeds from excess of blood, in which case it is rather to be considered as a salutary evacuation than a disease. If the disease, however, be very great, it may waste the patient's strength, and occasion an ill habit of body, dropsy, or consumption.

The treatment of this disorder must be varied according to the different causes from which it proceeds.

When it is owing to a stone in the bladder, the cure depends upon an operation, a description of which would be foreign to our purpose.

If it be attended with plethora, and symptoms of inflammation, bleeding will be necessary. The body must likewise be kept open by purgative medicines: as cream of tartar, rhubarb, calomel and jalap, Cooke's or Lee's pills, or small doses of lenitive electuary.

When there is reason to suspect an ulcer in the kidneys or bladder, the patient's diet must be cool, and his drink of a demulcent, healing, balsamic quality, as decoctions of marsh-mallow roots with liquorice, solutions of gum-arabic, flaxseed tea, and infusions of slippery elm. Three ounces of marsh-mallow roots, and half an ounce of liquorice, may be boiled in two quarts of water to one; two ounces of gum-arabic, and half an ounce of purified nitre, may be dissolved in the strained liquor, and a tea-cupful of it taken four or five times a day.

The early use of astringents in this disease, is often attended with bad consequences. When the flux is stopped too soon, the grumous blood, by being confined in the vessels, may produce inflammation, abscess, and ulcers. If, however, the case be urgent, or the patient seems to suffer from the loss of blood, gentle astringents may be necessary. In this case, the patient may take three or four ounces of lime-water, with half an ounce of the tincture of Peruvian bark, three times a day.

[An attack of hemorrhage from the urinary organs, in young persons, or those of a plethoric habit, requires the prompt use of the lancet, to the extent of reducing the pulse. As the disease frequently arises from venous congestion, it is always safest to bleed from a small orifice, unless evident signs of inflammation are present. Venesection is also proper in cases depending on calculous irritation in the kidneys, or on the passage of a stone through the ureter. In the last instance, bleeding from a large orifice should be carried to the extent of producing syncope. When there is much pain in the region of the kidneys, opium, in doses sufficiently large to give perfect relief, should be exhibited, and repeated as often as necessary. The application of mustard plasters to the small of the back will be beneficial in all cases. Cups applied immediately over the seat of the pain, may also be used with advantage. "The addition of some gallic acid to the tincture of uva ursi, will be found to answer every indication that can be expected from the employment of astringents in hæmaturia." (Thomson.) In cases unattended with pain in the bladder, or symptoms of irritation in the kidneys, great benefit has resulted from the use of muriated tincture of iron, in doses of from ten to twenty drops four or five times daily. Dr. Eberle says he succeeded in putting a permanent termination to the hemorrhage, in a case of long standing, by small doses of alum and ipecacuanha, in conjunction with milk diet, mucilaginous drinks, and the occasional use of a milk purgative.

Take      Powdered alum, one drachm.  
             ———— ipecac. twenty grains.

Mix—and divide into ten equal parts—one to be taken every morning, noon, and evening.



Absolute rest should be enjoined in all cases, especially if they be recent, or are attended with local irritation. Every thing calculated to stimulate the kidneys, or invite a determination of blood to the lower part of the body must be avoided.]

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### DYSENTERY—BLOODY FLUX.

[*Symptoms.*—Frequent disposition to go to stool; attempts to discharge fæces ineffectual; gripes; a grinding, bearing down pain in the lower bowel; discharges of mucus, or blood, or mixed; stools in the beginning have no fœtor; fever; sometimes slight chills, followed by heat, thirst, nausea, loss of appetite, occasional pains in the bowels, and costiveness or diarrhœa, usher in the disease, followed by the above symptoms, and occasionally by an eruption on the skin.

*Causes.*—Use of green fruit; indigestible, unwholesome, and irritating food of all kinds; immoderate use of powerful cathartics; vicissitudes of atmospheric temperature; obstructed perspiration; and whatever will produce bilious fever.

This disease is of frequent occurrence, and in some seasons prevails as an epidemic; and if not treated promptly and energetically, carries off large numbers of victims. It is always to be looked upon as a dangerous complaint. It often follows an attack of bilious fever, when the patient has not been sufficiently evacuated in the beginning of the disease. It occurs in the same circumstances as fevers, and always takes the grade of the prevailing fever. In most cases, it is, in fact, nothing more than "*bilious fever turned in on the bowels*"—take away the tenesmus, its distinguishing symptom and they cannot be told apart.

*Treatment.*—In cases where the febrile symptoms, as chills, heat, and full pulse, are conspicuous, bleeding should be resorted to without delay; and if these symp-

toms are not materially abated, the bleeding should be repeated. Take a quantity of blood sufficient to make a marked impression on the pulse. If there is great irritability of the stomach, or reason to suspect the presence of crude or indigestible articles in that organ, an emetic of ipecacuanha, twenty or thirty grains, should be administered. After the stomach becomes composed, which will be in from two to six hours, give a scruple of calomel to an adult, or in proportion to a child, to be followed in six or eight hours by a dose of castor oil. If the disease does not yield to this treatment, and there is no appearance of natural fæces, portions of calomel combined with ipecac., six or eight grains of the former to one of the latter, should be given every three hours until the stools assume a decidedly bilious or more natural appearance. If there be a peculiarity of constitution forbidding the employment of much calomel, ipecac. alone should be administered in doses as large and as frequently repeated as the stomach will bear without vomiting, say one to three grains every hour until natural stools are produced. The disposition to vomit may very generally be overcome by the application of a mustard plaster, or wilted horse-radish leaves, wet with vinegar, to the pit of the stomach, and kept on as long as the patient can bear them.

After the stools assume a more natural appearance, a portion of calomel (ten to twelve grains) combined with a grain of opium or ten grains of Dover's powder, may be given every night to be carried off next morning by oil or mild cathartic pills. Sometimes the constipation is so obstinate, that a great quantity of purgative medicine may be given without producing any apparent effect. In such cases, I have used a mixture of castor oil and turpentine with the happiest result. (Oil, one ounce, turpentine half an ounce.) Where the pain is great, and the disposition to stool is frequent, injections of starch, dissolved in warm water, (to which a tea-spoonful of laudanum may be added,) or of the mucilage of slippery-elm bark, or mutton broth, will be found of great utility. Injections may be used throughout the whole course of the disease with advantage.

Warm fomentations, flannels wrung out of hot water, and applied to the abdomen, are of great benefit—as soon as one begins to cool it should be replaced by another.

The bowels must be kept open regularly every day, by the use of cathartic pills, or sufficient doses of spiced rhubarb or castor oil. If the patient becomes costive, a relapse is the almost certain consequence, and the danger is much greater than at the beginning of the disease.

In the cases of children of relaxed or weakly habits, after the inflammatory symptoms have been subdued, I have often used a decoction of the blackberry or dewberry root with manifest benefit. A strong decoction of the inner bark of the sweet gum tree, sweetened with sugar, is also highly spoken of as a remedy in such cases.

The pleurisy root, called also flux root, butterfly weed, and swallow root, is a common remedy in many parts of the country. It is also recommended by Dr. Barton, of Philadelphia. A tea-cupful of a strong infusion, a handful to a quart of boiling water, may be given every two or three hours. It produces perspiration without increasing the heat of the body.

In obstinate cases of chronic dysentery, without fever, a solution of white vitriol and alum is highly recommended by Dr. Mosely. White vitriol three drachms, alum two drachms, boiling water one pint, to which may be added half an ounce of spirits of lavender, is the formula. Of this, a table-spoonful may be taken every morning, and a dose of Dover's powder in the evening. In such cases, the muriatic acid may be beneficially employed; in doses of six to ten drops in half a tumbler of gum water three times a day.

Dr. J. K. Mitchell, of Philadelphia, has used, in obstinate cases, mucilage in drink and as diet, with blue pill in from to five grains doses every night, with the most astonishing success. His patients were allowed nothing but the mucilage as a diet—and the medicine was not repeated more than once in twenty-four hours. Myrtle-wax, prepared from the *myrica cerifera*, bay-

berry, or candleberry myrtle, has been employed in dysenteries by Dr. W. M. Fahnstock, of Pennsylvania, and many other physicians, with such success, as to induce them to view it as almost a specific. They used the tallow made of the berries, in doses of half a drachm. The powdered root is sometimes employed: dose 10 to 15 grains.

Throughout the entire course of the disease, the diet should consist of the most digestible and unirritating articles; and great care is requisite in returning to customary diet and habits. During the violence of the disease, animal broths, as chicken water, mutton soup, or beef tea are to be preferred, if the inflammatory symptoms do not forbid their use; in that case, use sago, gruel, panado, arrow root, or Irish moss. This last is to be preferred before the others, when it can be procured, as it is more nourishing in small quantities, and entirely free from any irritating or stimulating quality. The drinks should consist of mucilage of gum Arabic, slippery-elm or flax-seed tea, barley or rice-water, and a decoction of the pith of the sassafras.

Absolute rest is of the greatest consequence; and many cases will be cured, when it is observed, which would, otherwise, terminate fatally.

The room in which the patient is confined should be kept perfectly clean and well ventilated, and an agreeable temperature maintained. The evacuations from the bowels should be removed as soon as possible, and the floor sprinkled with vinegar, in order to dissipate disagreeable odor. Flannel should be worn next to the skin, and the patient never rise to the close stool without having his feet as well as the whole body effectually protected from the influence of cool air.

In cases where the patient has become greatly emaciated, decided benefit may be obtained from a daily bath in a strong decoction of oak bark to which whiskey or brandy is added.

The bowel sometimes falls down or protrudes, and becomes extremely irritable, often so much so, that after it is returned, the syringe or clyster pipe cannot be used. When this occurs, the bowel should be replaced, (See



*Prolapsus Ani*;) and the patient made to sit in a warm bath of milk and water, or water impregnated with poppies or mullein.]

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### VOMITING OF BLOOD.—HÆMATEMESIS.

This is not so common as the other discharges of blood which have already been mentioned; but it is very dangerous, and requires particular attention.

Vomiting of blood is generally preceded by pain of the stomach, sickness, and nausea; and is accompanied with great anxiety, and frequent fainting fits.

This disease is sometimes periodical; in which case it is less dangerous. It often proceeds from an obstruction of the menses in women, and sometimes from the stoppage of the hæmorrhoidal flux in men. It may be occasioned by any thing that greatly stimulates or wounds the stomach, as strong vomits or purges, acrid poison, sharp or hard substances taken into the stomach, &c. It is often the effects of obstructions in the liver, the spleen, or some of the other viscera. It may likewise proceed from external violence, as blows or bruises, or from any of the causes which produce inflammation. In hysteric women, vomiting of blood is a very common, but by no means a dangerous symptom.

All the food and drink must be of a mild cooling nature, and taken in small quantities. Even drinking cold water has sometimes proved a remedy, but it will succeed better when sharpened with the weak spirits of vitriol. When there are signs of inflammation, bleeding may be necessary; but it is seldom admissible. Opiates may be of use; but they must be given in very small doses, as four or five drops of liquid laudanum twice or thrice a day.

[As soon as possible after vomiting of blood commences, a large mustard cataplasm should be applied to both sides of the body, as well as to the ankles and wrists. Placing the feet in warm water, and dry cup-

ping over the abdomen, will also assist materially in driving the circulation from the seat of the disease.—When it is considered hazardous to give a purgative, recourse should be had to laxative clysters. Emetics may very generally be resorted to with great benefit.—Full doses of ipecacuanha should be administered in lukewarm water, in such a manner as to act promptly, without producing nausea. When purgatives can be exhibited without increasing the affection, much advantage will be obtained from the use of calomel in moderate doses, followed in a few hours by a mixture of castor oil and turpentine. This course is peculiarly applicable to cases depending on congestion of the liver, spleen, or other abdominal organs. “The expressed juice of the common nettle (*urtica dioica*) has been much extolled for its effects in this hemorrhage, and I have known it used with apparent benefit.” (Eberle.) If faintness comes on, or the body becomes cold, the whole surface, especially the chest, must be rubbed with stimulating tinctures, as camphorated spirits, warm brandy or whiskey, Cologne water, &c. In every case, after the flow of blood has been checked, it is necessary to guard against its return by the strictest attention to regimen, and use of acidulated drinks. Diluted sulphuric acid or elixir vitriol will generally aid in restoring the tone of the stomach, and checking the tendency to a return of the disease.]

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### VOMITING.

Vomiting may proceed from various causes; as excess in eating and drinking; foulness of the stomach; the acrimony of the aliments; a translation of the morbid matter of ulcers, of the gout, the erysipelas, or other diseases, to the stomach. It may likewise proceed from a looseness having been too suddenly stopped; from the stoppage of any customary evacuations, as the bleeding piles, the *menses*, &c.; from a weakness of the stomach, the colic, the iliac passion, a rupture, a fit of the

gravel, worms, or from any kind of poison taken into the stomach. It is an usual symptom of injuries done to the brain; as contusions, and compressions. It is likewise a symptom of wounds or inflammations of the diaphragm, intestines, spleen, liver, and kidneys.

Vomiting may be occasioned by unusual motions, as falling, being drawn back in a carriage, or swinging.— It may likewise be excited by violent passions, or by the idea of nauseous or disagreeable objects, especially of such things as have formerly produced vomiting. Sometimes it proceeds from a regurgitation of bile into the stomach: in this case, what the patient vomits is generally of a yellow or greenish color, and has a bitter taste. Persons who are subject to nervous affections are often suddenly seized with violent fits of vomiting. Lastly, vomiting is a common symptom of pregnancy. In this case it generally comes on about two weeks after the stoppage of the *menses*, and continues during the first three or four months.

When vomiting proceeds from a foul stomach or indigestion, it is not to be considered as a disease, but as the cure of a disease. It ought, therefore, to be promoted, by drinking lukewarm water, or thin gruel. If this does not put a stop to it, a dose of ipecacuanha may be taken, and worked off with weak camomile tea.

When a retrocession of the gout, or the obstruction of customary evacuations occasion vomiting, all means must be used to restore these discharges; or, if that cannot be effected, their place must be supplied by others, as bleeding, purging, bathing the extremities in warm water, opening issues, setons, perpetual blisters, &c.

When vomiting is the effect of pregnancy, it may generally be mitigated by bleeding, and keeping the body gentle open. The bleeding, however, ought to be in small quantities at a time, and the purgatives should be of the mildest kind. Pregnant women are most apt to vomit in the morning immediately after getting out of bed, which is owing partly to the change of posture, but more to the emptiness of the stomach. It may generally be prevented, by taking a dish of coffee, tea, or

some light breakfast, in bed. Pregnant women, who are afflicted with vomiting, ought to be kept easy both in body and mind. They should neither allow their stomachs to be quite empty, nor should they eat much at once. Cold water is a very proper drink in this case. If the spirits be low, and the person apt to faint, a spoonful of cinnamon-water, with a little marmalade of quinces or oranges, may be taken.

If vomiting proceeds from weakness of the stomach, bitters will be of service. Peruvian bark infused in wine or brandy, with as much rhubarb as will keep the body gently open, is an excellent medicine in this case. Sulphuric acid is also a good remedy. It may be taken in the dose of fifteen or twenty drops, twice or thrice a day, in a glass of wine or water. Habitual vomitings are sometimes alleviated by making oysters a principal part of diet.

A vomiting which proceeds from acidities in the stomach, is relieved by alkaline purges. The best medicine of this kind is the magnesia alba, a teaspoonful of which may be taken in a dish of tea, or a little milk, three or four times a day, or oftener if necessary, to keep the body open.

When vomiting proceeds from violent passions, or affections of the mind, all evacuants must be carefully avoided, especially vomits. These are exceedingly dangerous. The patient in this case ought to be kept perfectly easy and quiet, to have the mind soothed, and to take some gentle cordial, to which a few drops of laudanum may occasionally be added.

When vomiting proceeds from spasmodic affections of the stomach, warm and aromatic plasters have a good effect. Aromatic medicines may likewise be taken inwardly, as cinnamon or mint tea, wine with spice boiled in it, &c. The region of the stomach may be rubbed with ether, or if that cannot be had, with strong brandy, or other spirits. The belly should be fomented with warm water, or the patient immersed up to the breast in a warm bath.

I have always found the saline draughts, taken in the act of effervescence, of singular use in stopping a vom-



iting, from whatever cause it proceeded. These may be prepared by dissolving a drachm of the subcarbonate of potash, in an ounce and a half of fresh lemon juice, and adding to it an ounce of peppermint water, the same quantity of simple cinnamon water, and a little white sugar. This draught must be swallowed before the effervescence is quite over, and may be repeated every two hours, or oftener, if the vomiting be violent. A violent vomiting has sometimes been stopped by cupping on the region of the stomach, after all other means had failed.

[Dr. Elliotson has introduced creosote to the notice of the profession as a powerful anti-emetic agent. He remarks, that he knows of no medicine at all to be compared to it in arresting vomiting, and that he had frequently known it successful when all other means had been used without success. It was given in doses of two or three drops at first, diffused in watery mucilage, and was gradually increased to ten drops or more.

As vomiting is almost always symptomatic, it is essentially necessary that the nature of the disease giving rise to it, should be ascertained, if possible, before any internal remedies are administered. In cases where the exhibition of calomel is proper for the removal of the primary disease, a large dose of that medicine alone, given in a teaspoonful of brandy, will seldom fail to check the vomiting. If the first dose is thrown up, a second should be given immediately. Firm and long-continued pressure over the pit of the stomach will often have a happy effect. Occasional doses of the infusion of columba is highly spoken of in such cases.]

As the least motion will often bring on the vomiting again, even after it has been stopped, the patient must avoid all manner of action. The diet must be so regulated as to sit easy on the stomach, and nothing should be taken that is hard of digestion. We do not, however, mean that the patient should live entirely upon slops. Solid food, in this case, often sits easier on the stomach than liquids.

## DIABETES.

The diabetes is a frequent and excessive discharge of urine. It is seldom met with among young people: but often attacks persons in the decline of life, especially those who follow the more laborious employments, or have been hard drinkers in their youth.

*Causes.*—Diabetes is often the consequence of acute diseases, where the patient has suffered by excessive evacuations; it may also be occasioned by great fatigue, as riding long journeys upon a hard-trotting horse, carrying heavy burdens, and running. It may be brought on by hard drinking, or the use of strong stimulating diuretic medicines, as tincture of cantharides, spirits of turpentine, and such like. It is often the effect of drinking mineral waters. Many imagine that these will do them no service unless they be drank in great quantities, by which mistake it often happens that they occasion worse diseases than those they were intended to cure. In a word, this disease may either proceed from too great a laxity of the organs which secrete the urine, from something that stimulates the kidneys too much, or from a thin dissolved state of the blood, which makes too great a quantity of it run off by the urinary passages.

*Symptoms.*—In diabetes, the urine generally exceeds in quantity all the liquid food which the patient takes. It is generally thin and pale, of a sweetish taste, and an agreeable smell. In many cases, however, it is insipid; differing but little in its sensible qualities from natural urine. It is always discharged in immense quantities; the patient frequently passing from twenty to twenty-four pints daily. The patient has continual thirst, with some degree of fever; his mouth is dry, and he spits frequently a frothy spittle. The strength fails, the appetite decays, and the flesh wastes away till the patient is reduced to skin and bone. There is a heat of the bowels; and frequently the loins, testicles, and feet swell.

It has been remarked, that diabetes is often preceded or accompanied with an affection of the lungs; and Dr. Bardsley informs us that he does not recollect an instance of the disease which was not attended with some affection of the chest.

This disease may generally be cured at the beginning: but after it has continued long the cure becomes very difficult. In drunkards, and very old people, a perfect cure is not to be expected.

**Regimen.**—Every thing that stimulates the urinary passages, or tends to relax the habit, must be avoided. For this reason, the patient should live on solid food.

[A vegetable diet is found to increase the disease in every case in which it is taken; for this reason, the patient should be restricted to animal food, either fresh, or cured without salt. Dried beef or venison form the best articles of diet.]

The patient ought daily to take exercise, but it should be so gentle as not to fatigue him. He should lie upon a hard bed or matráss. Nothing hurts the kidneys more than lying too soft. A warm dry air, the use of the flesh-brush, and every thing that promotes perspiration, is of service. For this reason, the patient ought to wear flannel next his skin.

**Treatment.**—Gentle purges, if the patient be not too much weakened by the disease, have a good effect. They may consist of rhubarb or aloes, and may be taken in such quantities as to keep the body gently open.

The patient must next have recourse to astringents and corroborants. Half a drachm of powder made of equal parts of alum and the insipissated juice, commonly called *Terra Japonica*, may be taken four times a day, or oftener, if the stomach will bear it. The alum must first be melted in a crucible; afterwards they may both be pounded together. Along with every dose of this powder, the patient may take a teacupful of the tincture of roses.

If the patient's stomach cannot bear the alum in substance, whey may be made of it, and taken in the dose

of a teacupful three or four times a day. The alum-whey is prepared by boiling two quarts of milk over a slow fire, with three drachms of alum, till the curd separates.

Opiates are of service in this disease, even though the patient rests well. They relieve spasm and irritation, and at the same time lessen the force of the circulation. Ten or twelve drops of liquid laudanum may be taken in a cup of the patient's drink three or four times a day.

The best corroborants which we know, are the Peruvian bark and wine. A drachm of the bark may be taken in a glass of red port or claret three times a day. The medicine will be both more efficacious and less disagreeable, if fifteen or twenty drops of elixir vitriol be added to each dose. Such as cannot take the bark in substance, may use the decoction, mixed with an equal quantity of red wine, and sharpened as above.

[In the variety of this disease termed *Diabetes Insipidus*, in which the urine contains no saccharine matter, gentle purgatives should be administered daily, in such quantities as to produce two or three free, consistent evacuations in every twenty-four hours. Pills of aloes, rhubarb and calomel, answer this purpose best. A majority of the cases of diabetes are brought on by derangement of the digestive organs, and the method of cure must depend in each case upon the condition of the organs primarily affected, and the cause giving rise to it; the object being to restore them to a healthy condition. When the disease is idiopathic, it is, perhaps, never cured; and the most that can be done is to palliate the symptoms, by the use of the remedies already detailed. The use of lime-water and milk in conjunction with other remedies, will very frequently afford much relief. The mineral acids are highly recommended in this complaint. They may be taken as directed in the treatment of chronic inflammation of the liver.]



## APOPLEXY.

Apoplexy is a sudden loss of sense and motion, during which the patient is to all appearance dead; the heart and lungs, however, still continue to move.— Though this disease proves often fatal, yet it may sometimes be removed by proper care. It chiefly attacks sedentary persons of a gross habit, who use a rich and plentiful diet, and indulge in strong liquors. People in the decline of life are most subject to the apoplexy. It prevails most in winter, especially in rainy seasons, and very low states of the barometer.

*Causes.*—The immediate cause of apoplexy is a compression of the brain, occasioned by an excess of blood, or a collection of watery humors. The former is called a *sanguine*, and the latter a *serous* apoplexy. It may be occasioned by any thing that increases the circulation towards the brain, or prevents the return of the blood from the head: as intense study; violent passions;\* viewing objects for a long time obliquely; wearing any thing too tight about the neck; a rich and luxurious diet; suppression of urine; suffering the body to cool suddenly after having been gently heated; continuing long in a warm or cold bath; the excessive use of spices, or high-seasoned food; excess of venery; the sudden striking in of any eruption; suffering issues or setons suddenly to dry up, or the stoppage of any customary evacuation; a mercurial salivation pushed too far, or suddenly checked by cold; wounds or bruises on the head; long exposure to excessive cold; and poisonous exhalations.

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\* I know a woman who, in a violent fit of anger, was seized with a sanguine apoplexy. She at first complained of extreme pain, *as if daggers had been thrust through her head*, as she expressed it. Afterwards she became comatose, her pulse sunk very low, and was exceedingly slow. By bleeding, blistering, and other evacuations, she was kept alive for about a fortnight. When her head was opened, a large quantity of extravasated blood was found in the left ventricle of the brain.

*Symptoms, and method of cure.*—The usual forerunners of apoplexy are giddiness, pain and swimming of the head; loss of memory; drowsiness; noise in the ears; the nightmare; a spontaneous flux of tears, and laborious respirations. When persons of an apoplectic make observe these symptoms, they have reason to fear the approach of a fit, and should endeavor to prevent it by bleeding, a slender diet, and opening medicines.

In the sanguine apoplexy, if the patient does not die suddenly, the countenance appears florid, the face is swelled or puffed up, and the blood vessels, especially about the neck and temples, are turgid; the eyes are prominent and fixed, and the breathing is difficult, and performed with a snorting noise. The excrements and urine are often voided spontaneously, and the patient is sometimes seized with vomiting.

In this species of apoplexy every method must be taken to lessen the force of the circulation towards the head. The patient should be kept perfectly easy and cool. His head should be raised pretty high, and his feet suffered to hang down. His clothes ought to be loosened, especially about the neck, and fresh air admitted into his chamber. His garters should be tied pretty tight, by which means the motion of the blood from the lower extremities will be retarded. As soon as the patient is placed in a proper posture, he should be bled freely in the neck or arm, and, if there be occasion, the operation may be repeated in two or three hours. A laxative clyster, with plenty of sweet oil or fresh butter, and a spoonful or two of common salt in it, may be administered every two hours; and blistering plasters applied between the shoulders, and to the calves of the legs.

[As soon as the patient can swallow, a large dose of calomel and jalap, or scammony, should be exhibited; and if it fails to operate promptly and freely, follow it with Epsom salts, or senna tea, or castor oil. The bowels should be kept open by the liberal use of such medicines as act on the liver.]

As soon as the symptoms are a little abated, and the

patient is able to swallow, he ought to drink freely of some diluting opening liquor ; as a decoction of tamarinds and liquorice, cream-tartar, whey, or common whey with cream of tartar dissolved in it. All spirits and other strong liquors are to be avoided. Even volatile salts held to the nose do mischief. Vomits for the same reason, ought not to be given, or any thing that may increase the motion of the blood towards the head.

*In the serous apoplexy* the symptoms are nearly the same, only the pulse is not so strong, the countenance is less florid, and the breathing less difficult.—Bleeding is as necessary here as in the former case. The patient should be placed in the same posture as directed above, and should have blistering plasters applied, and receive opening clysters in the same manner. Purges are here likewise necessary, and the patient may drink strong balm tea. If he be inclined to sweat, it ought to be promoted by drinking small wine whey, or an infusion of *carduus benedictus*. A plentiful perspiration kept up for a considerable time has often carried off a serious apoplexy. Out of a fit of serous apoplexy the cephalic and nervous medicines recommended in palsy will be proper, taking occasionally some stomachic purgative. If the disease arise in consequence of a suppression of piles, leeches should be applied to the hemorrhoidal veins, fomentations must be employed, and the intestines stimulated by means of aloetic purges.

When apoplectic symptoms proceed from opium, or other narcotic substances taken into the stomach, vomits are necessary. The patient is generally relieved as soon as he has discharged the poison in this way.

Persons of plethoric or apoplectic make, or those who have been attacked by it, ought to use a very spare and slender diet, avoiding all strong liquors, spices, and high-seasoned food. They ought likewise to guard against all violent passions, and to avoid the extremes of heat and cold. The head should be shaved, and daily washed with cold water. The feet ought to be

kept warm, and never suffered to continue long wet. The body must be kept open either by food or medicine, and a little blood may be let every spring and fall. Exercise should by no means be neglected; but it ought to be taken in moderation. Nothing has a more happy effect in preventing apoplexy than perpetual issues or setons; great care, however, must be taken not to suffer them to dry up, without opening others in their stead. Apoplectic persons ought never to go to rest with a full stomach, or to lie with their heads low or to wear any thing too tight about their necks. When an attack of apoplexy is immediately threatened, blood-letting is the remedy most to be relied on, and the blood should be drawn either from the jugular vein or temporal artery, determining the extent of blood to be taken away by the circumstances of the case. When a lethargic disposition prevails, bleeding should also be adopted, particularly topical, from the temples, by means of leeches, or from the nape of the neck by the scarificator and cupping; the frequent use of cathartics, and a blister applied to the head or its immediate vicinity.

Take	Submuriate of Mercury, six grains.
	Compound extract of Colocynth, fifteen grains.

Make four pills for a dose.

The preceding cautions are of far greater importance than such persons may be aware of. The circulation, which is slower during sleep than when awake, is farther clogged by a fullness of the stomach. The low posture of the head not only favors, but seems to invite stagnation: and tight ligatures round the neck, impede the return of the blood from the vessels of the brain, so that an apoplexy, not only very naturally, but almost inevitably follows. Instead of being astonished at the number of those who go to bed in apparant health, and are found dead in the morning, we should consider it as a matter of much more surprise for a person of a plethoric habit, after unchecked indulgence



in the pleasures of the table, to go to rest without any regard to the inclination of his head or the tightness of his collar, and ever to rise again.\*

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## EPILEPTIC FITS.

*Symptoms.*—The patient falls suddenly with a deprivation of sense, while the muscles of the face and every part of the body are violently convulsed.

*Causes.*—Excessive drinking; sudden stoppage of the courses; severe fright; injuries of the head, teething, in children; and irritation from worms in the stomach and intestines.

*Treatment.*—To prevent the patient from injuring himself by the violence of his struggles, he ought immediately to be placed on a bed. The clothing should be every where loosened, and the head moderately elevated. A slip of wood should be placed between the jaws to prevent their closing on the tongue, and nothing administered in a glass vessel. Should it appear that the patient has been drinking too freely of spirituous liquors, or has loaded his stomach with indigestible matter, a strong emetic should be immediately given; which, by cleansing the stomach, will often terminate the paroxysm.

If suppressed evacuations be the cause, they must be re-excited by such means as are calculated to restore the course of nature. If the patient complain of pain in the head, a seaton in the nape of the neck should not be omitted. If worms be the fault, which may be known by an offensive breath and irregular appetite, they must be removed before a radical cure can be effected.

The suppression of customary evacuations has oc-

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\*Persons inclined to apoplexy derive great benefit from cupping. This operation should never be omitted once or twice every year.

casioned the disease; the repulsion of the gout; and sometimes the deficiency of the constitutional strength, which prevents its formation, has had the same effect, In all these instances the knowledge of the cause will suggest the means of relief.

When causes of debility, and irritability, produce epilepsy; in other words, when the irritability is so great that the slightest irritation will induce the fits, the remedy is equally obvious. Warm, generous diet, which appear at first indicated, must be used with caution; since a fullness of the vessels is, alone, in tender habits, a cause of irritability. Tonic medicines, with some of the narcotic bitters, as hops, Iceland, Liverwort, and lettuce, are the best remedies in such cases, anxiously guarding, as usual, against any accumulations in the head; but not by such medicines as will weaken.

Sometimes an epileptic fit is preceded by an uneasy sensation in some of the limbs or trunk of the body, creeping upwards to the head. In this case the fit will be prevented by applying a ligature above the part so affected.

Many cases have occurred, in which the disease has been cured with the sugar of lead, particularly under the age of maturity. It should be commenced in small doses, beginning with one-fourth of a grain, for a half grown person, and gradually increased to two grains or more, thrice a day, made into pills with the crumbs of bread. If from using this medicine the bowels be disordered, it should be laid aside until relief is obtained by the use of the bath, mild laxatives, and opium in more than usual doses. A small portion of opium, combined with the lead, (*see Dispensatory*,) will generally obviate or correct its unpleasant operations.

The good effects of nitre of silver, commonly called lunar caustic, have also been attested by eminent physicians, in doses of one-fourth, very gradually increased to a grain, twice a day, made into pills with bread. The flowers of zinc have likewise been highly spoken of, and are said to have performed permanent cures, in doses of six or eight grains, morning and night.

As there is incontrovertible evidence, that these med-

icines have succeeded in certain cases, they are all deserving of a fair trial, particularly in the treatment of a disease in which no plausible remedy should be left untried.

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### EFFECTS OF EXTREME HEAT.

The effects of extreme heat, though not so common in this country, are no less fatal, and much more sudden than those of cold. In hot countries people frequently drop down dead in the streets, exhausted with heat and fatigue. In this case, if any warm cordial can be poured into the mouth, it ought to be done. If this cannot be done, they may be thrown up in the form of a clyster. Volatile spirits, and other things of a stimulating nature, may be applied to the skin, which should be well rubbed with coarse cloths, whipped with nettles, or other stimulating things. Some of the ancient physicians are said to have restored to life persons apparently dead, by beating them with rods.

Head-aches are often occasioned by exposure to intense heat; and in warm climates, where people are very liable to what they call *coups de soleil*, or strokes of the sun, it is a common custom to lay linen cloths, several times doubled, on the head, and to keep them moistened with very cold water for half an hour, or till the stupor is diminished. This they term *drawing the fire out of the head*.

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### FAINTING FITS.—SYNCOPE.

Strong and healthy persons, who abound with blood, are often seized with sudden fainting fits, after violent exercise, drinking freely of warm or strong liquors, exposure to great heat or intense application to study.

In such cases the patient ought to be made to smell some vinegar. His temples, forehead, and wrists, ought at the same time to be bathed with vinegar mixed with an equal quantity of warm water; and two or three spoonfuls of vinegar, with four or five times as much water, may, if he can swallow, be poured into his mouth.

If the fainting proves obstinate, or degenerates into a *syncope*, that is, an abolition of feeling and understanding, the patient must be bled. After the bleeding, a clyster will be proper, and then he should be kept easy and quiet, only giving him every half-hour a cup or two of an infusion of any mild vegetable, with the addition of a little sugar and vinegar.

When swoonings, which arise from this cause, occur frequently in the same person, he should, in order to escape them, confine himself to a light diet, consisting chiefly of bread, fruits, and other vegetables. His drink ought to be water or small beer, and he should sleep but moderately, and take much exercise.

But fainting fits proceed much oftener from a defect than an excess of blood. Hence they are very ready to happen after great evacuations of any kind, obstinate watching, want of appetite, or the like. In these, an almost directly opposite course to that mentioned above must be pursued,

The patient should be laid in bed, with his head low, and being covered, should have his legs, thighs, arms, and his whole body rubbed strongly with hot flannels. Hungary-water, volatile salts, or strong smelling herbs, as rue, mint, or rosemary, may be held to his nose. His mouth may be wet with a little rum or brandy; and, if he can swallow, some hot wine mixed with sugar and cinnamon, which is an excellent cordial, may be poured into his mouth. A compress of flannel dipped in hot wine or brandy must be applied to the pit of his stomach, and warm bricks, or bottles filled with hot water laid to his feet.

As soon as the patient is recovered a little, he should take some strong soup or broth, or a little bread or biscuit soaked in hot-spiced wine. To prevent the return



of the fits, he ought to take often, but in small quantities, some light yet strengthening nourishment, as panada made with soup instead of water, new-laid eggs lightly poached, chocolate, light roast meats, or jellies.

These fainting fits, which are the effect of bleeding, or of the violent operation of purges, belong to this class. Such as happen after artificial bleeding are seldom dangerous, generally terminating as soon as the patient is laid upon the bed; indeed, persons subject to this kind should always be bled lying, in order to prevent it. Should the fainting, however, continue longer than usual, volatile spirits may be held to the nose, and rubbed on the temples.

When fainting is the effect of too strong or acrid purges or vomits, the patient must be treated in all respects as if he had taken poison. He should be made to drink plentifully of milk, warm water, and oil, or barley water; emollient clysters will likewise be proper, and the patient's strength should afterwards be recruited, by giving him generous cordials, and anodyne medicine.

Faintings are often occasioned by indigestion. This may either proceed from the quantity or quality of the food. When the former of these is the cause, the cure will be best performed by vomiting, which may be promoted by causing the patient to drink a weak infusion of camomile flowers. When the disorder proceeds from the nature of the food, the patient, as in the case of weakness, must be revived by strong smells, &c., after which he should be made to swallow a large quantity of light warm fluid, which may serve to drown, as it were, the offending matter, to soften its acrimony, and either to effect a discharge of it by vomiting, or force it down into the intestines.

Even disagreeable smells will sometimes occasion swoonings, especially in people of weak nerves. When this happens, the patient should be carried into the open air, have stimulating things held to his nose, and those substances which are disagreeable to him ought immediately to be removed. But we have already taken no-

tice of swoonings which arise from nervous disorders, and shall therefore say nothing upon that head.

Fainting fits often happen in the progress of diseases. When they occur at the beginning of malignant fevers, they indicate great danger. In such cases, vinegar used both externally and internally is the best remedy during the paroxysm, and plenty of lemon-juice and water after it. Swoonings which happen in diseases accompanied with great evacuations must be treated like those which are owing to weakness, and the evacuations ought to be restrained. When they happen towards the end of a violent fit of an intermitting fever, or at that of each exacerbation of a continual fever, the patient must be supported by small draughts of wine and water.

Delicate and hysteric women are very liable to swooning or fainting fits after delivery. These might be often prevented by generous cordials, and the admission of fresh air. When they are occasioned by excessive flooding, it ought by all means to be restrained. They are generally the effect of mere weakness or exhaustion. Dr. Engleman relates the case of a woman "in child-bed, who, after being happily delivered, suddenly fainted, and lay upwards o, a quarter of an hour apparently dead. A physician was sent for; her own maid, in the meanwhile, being out of patience at his delay, attempted to assist her herself, and extending herself upon her mistress, applied her mouth to hers, blew in as much breath as she possibly could, and in a very short time the exhausted woman awaked as out of a profound sleep, when, proper things being given her, she soon recovered."

"The maid being asked how she came to think of this expedient, said she had seen it practised by midwives, upon children, with the happiest effect."

We mention this case chiefly that other midwives may be induced to follow so laudable an example. Many children are born without any signs of life, and others expire soon after the birth, who might, beyond all doubt, by proper care, have been restored to life.

From whatever cause fainting fits proceed, fresh air

is always of the greatest importance to the patient. By not attending to this circumstance, people often kill their friends while they are endeavoring to save them. Alarmed at the patient's situation, they call in a crowd of people to his assistance, or perhaps to witness his exit, whose breathing exhausts the air, and increases the danger. There is not the least doubt but this practice, which is very common among the lower sort of people, often proves fatal, especially to the delicate, and such persons as fall into fainting fits from mere exhaustion, or the violence of some disease. No more persons ought to be admitted into the room where a patient lies in a swoon than are absolutely necessary for his assistance, and the windows of the apartment should always be opened, at least as far as to admit a stream of fresh air.

Persons subject to frequent swoonings, or fainting fits, should neglect no means to remove the cause of them, as their consequences are always injurious to the constitution. Every fainting fit leaves the patient in dejection and weakness; the secretions are suspended, the humors disposed to stagnation, and obstructions are formed. The only kind of swoonings not to be dreaded are those which sometimes mark the *crisis* in fevers; yet even these ought, as soon as possible, to be removed.

I have before remarked, but I deem it of importance to repeat the observation, that it is only when the fainting fit evidently arises from a fullness of the habit, and is accompanied with a total abolition of feeling and understanding, that bleeding is advisable. The use of the lancet might otherwise have the most deadly effect. Many persons, even of robust constitutions, are very apt to faint upon having a vein opened and losing a little blood. How dangerous, then, must the operation be, when a patient has already fainted, and most probably from extreme weakness and a defect of blood! I have no doubt but many a murder has been rashly committed in such cases.

## HYSTERIC FITS.

This disease more frequently occurs in unmarried or barren women, and those who lead a sedentary life. It very seldom appears before the age of puberty, or after the age of thirty-five years. The time at which it most readily occurs, is that of the menstrual period.

*Symptoms.*—Generally commences with universal languor and coldness of the extremities. The color of the face is variable, being sometimes flushed and sometimes pale. The pulse becomes unequal and obscure. The stomach is sometimes affected with vomiting, the lungs with difficulty of breathing, and the heart with palpitations. A painful sensation is often felt, like that of a globe or a ball in the left side of the belly, advancing upwards, and producing the same uneasiness in the stomach, from which it rises to the throat, occasioning by its pressure, a sense of suffocation; when a degree of fainting comes on, certain convulsive motions takes place, agitating the trunk of the body and limbs in various ways; after which, alternate fits of laughter and crying occur, and a remission then ensues. In some patients, a violent beating pain takes place in some part of the head, as if a nail were driven into it. Sharp pains, likewise, attack the loins, back, and bladder, and the patient makes an usual quantity of urine as limpid as water; which is one of the most characteristic signs of the disease.

The appearances which takes place in this affection, are considerably varied in different persons, and even in the same persons at different times. It differs by having more or fewer of those circumstances above mentioned; by those circumstances being more or less violent, and by the different duration of the whole fit.

*Causes.*—Excessive evacuations, particularly of the menses, depressing passions, continued anxiety, violent excitement, sudden surprise, grief, indigestion, &c.



**Treatment.**—If the patient be young and of a plethoric habit, blood-letting will be required during the fit; but in delicate constitutions, this operation is not advisable. Volatiles, singed feathers, and the like, should be applied to the nostrils; and if the patient can swallow, a teaspoonful of ether, or tincture of asafœtida, or thirty or forty drops of laudanum, may be given, in a glass of cold water, and repeated in a couple of hours, or sooner, if necessary. Clysters of gruel, to which may be added a teaspoonful or two of laudanum, will also have a good effect. The feet and legs should, as soon as possible, be put in warm water, and well rubbed with the hand. Cold water sprinkled on the face, and the admission of the cool air in the room, are likewise proper auxiliaries.

During the intermission of the fit, the nervous system should be strengthened to prevent a recurrence, by the tonic powders, pills, or drops, (*see Dispensatory*,) in their usual doses, after having administered some purgative medicine. Upon the approach of any languor, the patient should instantly take a glass of wine, or a teaspoonful of lavender, or ten or twelve drops of laudanum in a glass of cold water.

When hysteric affections originate from a suppression or obstruction of the menses, these must be promoted by adopting the means advised under those heads.

**Regimen.**—An attention to diet is highly proper for the removal of this disease. A milk and vegetable diet duly persisted in, will have the most salutary effect, especially in sanguine constitutions; but, should vegetables create flatulency and acidity in the stomach and bowels, in such cases animal food will be the most appropriate diet. The best drink after dinner is water with a little good wine, or a smaller quantity of old spirits.

Tea should be prohibited altogether, or used sparingly. Moderate exercise, particularly riding on horseback, is of the greatest service, as are likewise amusements and cheerful company.

## PALSY

Is a disease consisting in a loss of the power of voluntary motion, but affecting certain parts of the body only, and by this it is distinguished from apoplexy. In the most violent degrees of palsy, the patient loses both the power of motion and sense of feeling, either of one side or the lower half of the body. The first is termed *hemiplegia*, the latter *paraplegia*. When it affects particular parts only, as the tongue, the lip, the eyelid, &c., it is termed a local palsy.

*Symptoms.*—If this disease be not the effect of apoplexy it is often preceded by universal torpor, giddiness, a sense of weight or uneasiness in the head, dulness of comprehension, loss of memory, and a sense of coldness in the part about to be affected; there is also, sometimes tremor, creeping, and pain in the part.

*Causes.*—Compression of the brain from any of the causes inducing apoplexy; certain poisons received into the body, as lead, arsenic, &c.; injuries done the spinal marrow. It is also produced in consequence of extreme debility, and old age.

*Treatment.*—If palsy arise from the causes producing apoplexy, it must necessarily be treated in the manner recommended for the cure of that disease, by bleeding copiously in full habits, and keeping the bowels in a laxative state for many days.

It will also be requisite to apply a large blister to the back of the neck, and when the discharge is lessened, others should be applied behind each ear. After congestion is removed by this mode of treatment, it will then be necessary to commence with the stimulating pain, in order to rouse the torpid vessels into action. When stimulants are resorted to, they should be changed every eight or ten days, and sometimes alternated

with gentle laxatives, to prevent returns of accumulation on the brain.

In some instances this disease arises from diminished energy of the brain; and in such cases we must have recourse to stimulants, both internally and externally, without delay. In this state the essential oils and balsams are frequently employed with good effects. One of the most active and useful medicines of this class is the spirit of turpentine in doses from twenty to sixty drops thrice a day. A tablespoonful of horse-radish scraped, or the same quantity of mustard-seed, swallowed three or four times a day, will have a good effect.

The volatile alkali is also of infinite service in large doses. At the same time, external stimulants must be duly attended to, such as dry frictions over the part affected, with a flesh brush or rough cloths, and the flour of mustard, or flannels impregnated with the tincture of Cayenne pepper, oil of turpentine, oil of sassafras, or volatile liniment, or some of the tincture of cantharides. Stimulating the part with nettles has produced good effects, as well as electricity, particularly in local palsies.

A seaton in the neck, particularly if the patient be affected with giddiness, will afford considerable relief, and should not be neglected. Cases of palsy have been cured by salivation.

If the disease be in consequence of a curvature of the back bone, compressing the spinal marrow, a perpetual blister or issue over the part affected, or on each side of the diseased portion of the bone, is the only remedy. A local palsy, particularly when it is confined to one muscle, will generally yield to the application of a blister as near to the part affected as possible.

*Regimen.*—In plethoric habits the diet should be of the lightest kind, but quite the contrary in debilitated habits. In such cases the diet should be warm and strengthening, seasoned with spices and aromatic ingredients, and the drink must be generous wine, mustard whey, ginger tea, or brandy and water. Flannel worn next the skin is peculiarly proper; so is regular



exercise, when not carried to fatigue or used in a cold damp air.

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### HYPOCHONDRIAC DISEASE.

*(Commonly called Vapors, or Low Spirits.)*

This complaint chiefly occurs in the male, and that at advanced life; and it is confined, for the most part, to persons of a sedentary or studious disposition, especially such as have indulged in grief or anxiety.

*Symptoms.*—Languor, listlessness, or want of resolution and activity, with respect to all undertakings; a disposition to seriousness, sadness, and timidity, as to all future events; an apprehension of the worst or most unhappy state of them, and, therefore, often, on slight ground, a dread of great evil. Such persons are particularly attentive to the state of their own health, and to the smallest change of feeling in their bodies, from an unusual sensation, perhaps of the slightest kind, they apprehend great danger, and even death itself; and in respect to all their feelings and apprehensions, there are, for the most part, unfortunately the most obstinate belief and persuasion.

This diseased state of the mind is sometimes attended with symptoms of indigestion, hysterical affections, and sometimes with melancholy; but these are merely effects.

*Causes.*—Indolence; violent passions of the mind; suppression of customary evacuations; obstructions of some of the viscera, &c.; but its immediate cause appears to be a loss of energy in the brain, or torpid state of the nervous system. It would appear, however, that these complaints proceed from an original affection of the stomach.

*Treatment.*—The cure of this disease seems to de-



pend on exciting the nervous energy which is depressed, and that particularly by attending to the state of the mind.

A constant state of motion should, therefore, be advised, especially by riding on horseback, and making long journeys, which present new objects to the view.

Nothing is more pernicious in this disease, than idleness; but in avoiding it, all application to former studies is to be prevented. The present emotions must be favored and indulged; and though an attempt should be made to withdraw the attention of such patients from themselves, yet their confidence ought first to be gained; and since the persuasion of their own opinion is strong, and the infallibility of their own fears and sensations rooted, however absurd these may be, they require a very nice management. Raillery must never be attempted. From this supposed bodily affection, the mind should be diverted by employments suitable to the circumstances and situation in life, and unattended with much emotion, anxiety, and fatigue. Company which engages attention, and is at the same time of a cheerful kind, will always be found of great service. The occasional reading of entertaining books, or playing at any game, in which some skill is required, and where the stake is not an object of much anxiety, if not too long protracted, will farther assist in diverting the mind from itself.

The symptoms of indigestion, and hysteric complaints, that so frequently attend this state of mind, although the effect rather than the cause, are objects of practice; inasmuch as they tend to aggravate and realize the false apprehensions of the patient. The secondary affections require the same mode of treatment recommended for indigestion and hysteric disease. The warm bath is peculiarly beneficial in this complaint, and when the system becomes somewhat invigorated, the cold bath may be employed with advantage, provided there exist no obstructions in the bowels. From an acid acrimony generally prevailing in the stomach, the rust of steel, or filings of iron, in doses of ten grains thrice a day, is the

most salutary medicine of all the tonics. Magnesia and lime-water are useful on the same account.

[A case is related of a gentleman living some years ago six miles from Nashville, who was afflicted with the hypochondriac disease very often, his physician, who lived in Nashville, was frequently sent for in the night when the gentleman thought himself about to die. The Doctor knowing his patient well, would sometimes refuse to go until morning, and would then find his patient walking about having forgot that he had sent for the Doctor, but at other times he would express much displeasure at the Doctor's treatment of him. After a quarrel between the patient and his physician, it would terminate in friendship and a perfect recovery; on one occasion, however, the Doctor was sent for in the night, who believing his friend in one of his old ways, refused to go, although urged by the faithful servant, but on the arrival of a second servant he reluctantly set out. He had not reached the plantation, however, before he was met by another, or third servant, who urged the Doctor to more speed; stating that his master was indeed very ill. When the Doctor entered his patient's room and took his seat beside his bed, he soon found that it was as he suspected, but he suppressed his anger, felt the pulse, while his friend chided him for his slow movements, and said he was now dying, he feared he could not do him any good now, but if he had come immediately, he might have saved his life—the Doctor begged his friend to forgive him, and said he had expected he was in one of his old whims, but he found indeed that it was all over with him, he must die, and suggested to him to arrange his worldly affairs—the gentleman becoming now alarmed, begged the Doctor to pray for him, although from the Doctor's habits he knew he seldom prayed unless it was to ask his heavenly Father to damn his own, or some other's souls. The Dr. said he would try to pray for him, and began by asking the Great One to look down on this most miserable sinner, who was now about to leave this world, conscious of his vileness and wretched condition; he prayed that God

would forgive all his sins, but one which lay heavy on his mind, he prayed particularly to be forgiven—and that was his having cheated a poor widow woman out of six hundred and forty acres of land; the patient sprang up in his bed and stated that it was a lie, a damn lie, he never had done so. It is added that as his rage subsided he found himself well.]

*Regimen.*—A proper diet constitutes an essential part of the treatment of this malady. In general, light animal food is what alone agrees with such patients; for there are few, if any, vegetables which do not prove flatulent in their bowels. Acids are particularly injurious. All malt liquors, except porter, are apt to excite too high a fermentation in the stomach; and wines, for the most part, are liable to the same objection. If an exception can be made in favor of any, it is good old Maderia, when it can be obtained, which not only promotes digestion and invigorates the concoctive powers, but acts, immediately as a generous and wholesome cordial. The use of spirituous liquors is not to be recommended as an habitual recourse, though they may be taken occasionally, in a moderate quantity, diluted with water. Tea and coffee, though hurtful to people with bad digestion, are often useful, however, to the hypochondriac. Moderate exercise, we have already observed, is indispensable in the cure of this complaint; and it cannot be taken any way with so much advantage as in long journeys, when convenient, accompanied with such circumstances, as may convert them into an agreeable amusement.

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#### CRAMP.

A painful spasm of the calf of the leg or muscles of the toes, and sometimes of the stomach.

*Causes.*—Sudden stretching of the limbs; advanced pregnancy; acidity; indigestion; irritation and debility.



*Treatment.*—A cramp of the calf of the leg is best relieved by standing up, which simple act, by throwing the weight of the body on the toes, forcibly extends the muscles, and thus takes off the spasm. If the cramp arise from acidity or indigestion, give every night a pill composed of half a grain of opium, with six grains each, of rhubarb and prepared chalk, and administer ten grains of the rust of steel, morning and noon.

A cramp is speedily relieved by dashing cold water on the feet and legs, or standing on a wet cold hearth or floor.

A cramp of the stomach is best treated by an infusion of red pepper, (*see Materia Medica*), or a large dose of ether or laudanum, accompanied with friction on the part, either by a flesh brush or flannel. When these fail, a very copious bleeding will sometimes remove the spasm, after which the patient must be purged.

The chief remedies for spasm are those which remove the irritating cause. If this cannot be ascertained, we must endeavor to lessen irritability by anodynes. A sudden terror, the apprehension of a severe operation, on the return of the fit, and unexpected surprise, have succeeded. Dashing water in the face, touching a person with something cold, or throwing up a cold clyster, have, from the same principles, been effectual.

Persons subject to the cramp in the leg may prevent it by wearing stockings in bed, and occasionally rubbing the part with camphorated oil. According to vulgar authority, sulphur grasped in the hand, is good to cure, and carried in the pocket, to prevent cramp.

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## PALPITATION OF THE HEART.

*Symptoms.*—In this disease, the motion of the heart is performed with more rapidity, and generally with greater force than usual, which may not only be felt by the hand, but often perceived by the eye, and even heard: there is frequently a difficulty of breathing, a purplish



hue of the cheeks and lips, and a variety of anxious and painful sensations. It sometimes terminates in sudden death.

*Causes.*—A morbid enlargement of the heart itself, and of the large vessels; organic affections; an hereditary disposition; plethora; debility, or a morbid condition of the system; mal-conformation of the chest, and many of the causes inducing fainting.

*Treatment.*—This complaint is best relieved by keeping the mind and body at rest, avoiding every cause of irritation, and keeping up a proper equilibrium of the circulation.

When the disease arises from plethora, and the action of the heart is violent, bleeding is indispensable, which should be followed by a cooling cathartic and afterwards the exhibition of nitre every two or three hours, or the tincture of digitalis, in doses from ten to twenty drops thrice a day, by lessening the action of the arterial system, will effect a cure.

When there is reason to believe this affection is in consequence of debility, the solution of arsenic, in its usual doses, taken for some time, is a certain remedy. When the nervous system is affected, small doses of ether, laudanum, or some cordial will be found very serviceable.

The feet should be kept dry and warm, frequently rubbed, and, if not otherwise warm, with powdered mustard seed, or tincture of Cayenne pepper.

Those who are subject to a palpitation of the heart, should carefully avoid violent exercise, irregular passions, costiveness, and all circumstances that may tend to increase the action of the sanguiferous system.

## HICKUP.

A spasmodic affection of the diaphragm, and sometimes of the stomach, is a troublesome, but not often a dangerous complaint.

*Causes.*—Debility, acidity, flatulence, cold drinks when the person is warm, repletion, worms, repelled gout, &c.

*Treatment.*—When it arises, as is most frequently the case, from spasm induced by debilitating causes, the warm antispasmodics, as ether, laudanum, the camphorated mixture, hartshorn, tincture of asafœtida, or some of the essential oils, will be useful. A teaspoonful of vinegar, slowly swallowed, has frequently afforded relief. Preserved damsons have likewise been found of excellent use in this complaint.

When acidity is discovered to be the cause, give the absorbent mixture, or twenty drops of hartshorn, with a teacupful of magnesia in a cup of mint tea, or a spoonful or two of milk and lime-water; and, to prevent its recurrence, take ten grains of the rust of steel thrice a day. When occasioned by poisons or improper food, an emetic will be proper.

In weak stomachs, oppressed with indigestible food, a glass of good wine or spirits and water often relieves. Ether applied externally to the stomach on a soft linen rag with a warm hand to confine it, is a good remedy; so is the application of an acrid cataplasm or blister in obstinate cases.

Like other spasms, it is often stopped by strongly arresting the attention, whether by hope, fear, or terror. A sudden alarm has often succeeded in curing this affection after every other means had failed. On the same principle, a deep, continued inspiration will often remove slighter degrees of this troublesome complaint.

## ASTHMA.

*Symptoms.*—An alarming oppression of weight about the breast, with dread of suffocation.

*Causes.*—Late and excessive suppers; great fatigue; drunkenness, or sleeping on the back.

*Treatment.*—If the patient be of a plethoric habit, bleed, purge, and use a spare diet. And when the disease is the consequence of debility and weak nerves, the tonic medicines, as steel, bark, or Columbo in their usual doses, are proper.

A glass of brandy, at bed-time, will generally prevent the attack.

*Prevention.*—The patient should sleep on a hard bed, which invites to frequent changes of sides, eat light suppers, which, with due exercise, and cheerfulness during the day, form the best preventive remedies.

## ASTHMA.—PHTHISIC.

The asthma is a spasmodic\* disease of the lungs, coming on by paroxysms, which seldom admits of a cure. Persons in the decline of life are most liable to it. It is distinguished into the moist and dry, or hu-

\* Dr. Cullen, and most other writers, refer the proximate or immediate cause of asthma to a preternatural or spasmodic constriction of the muscular fibres of the air-cells of the lungs, which not only prevents their being so dilated as to admit of a free and full inspiration, but also gives them a rigidity which interferes with a free and full expiration. This doctrine, however, has been disputed by Dr. Bree, who, in a very ingenious treatise on this disease, gives it as his opinion that irritation situated within the bronchia or air-cavities, and arising either from an effusion of serum, or from ærial acrimony, is the true proximate cause of convulsive asthma. The mucus, which is excreted in the course of the disease, and which has been looked upon by Dr. Cullen and others as only an effect, Dr. B.

moral nervous. The former is attended with expectoration or spitting; but in the latter the patient seldom spits unless sometimes a little tough phlegm, by the mere force of coughing.

It rarely appears before the age of puberty, and seems to attack men more frequently than women; particularly those of a full habit, in whom it seldom fails, by frequent repetition, to occasion some degree of emaciation. When the disease is attended with an accumulation and discharge of humors from the lungs, it is called the humid asthma; but when it is unaccompanied by any expectoration, it is known by the name of the dry or spasmodic asthma.

*Causes.*—The asthma is sometimes hereditary. It may likewise proceed from a bad formation of the breast; the fumes of metals or minerals taken into the lungs; violent exercise, especially running; the obstruction of customary evacuations; sudden retrocession of the gout, or striking-in of eruptions; and violent passions of the mind. In a word, the disease may proceed from any cause that either impedes the circulation of the blood through the lungs, or prevents their being duly expanded by the air.

*Symptoms.*—Asthma is known by a quick laborious breathing, which is generally performed with a kind of wheezing noise. Sometimes the difficulty of breathing is so great, that the patient is obliged to keep in an erect posture, otherwise he is in danger of being suffocated. A fit or paroxysm of the asthma generally happens after a person has been exposed to cold easterly

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views as a prominent cause of the paroxysm; or when it is absent, only yielding to a different cause equally irritating to the organ, and exciting spasmodic contractions of the respiratory muscles. Dr. Darwin says, that whatever may be the remote causes of paroxysms of asthma, the immediate cause of the convulsive respiration, whether in the common asthma, or in what is termed the convulsive, which are perhaps only different degrees of the same disease, must be owing to violent voluntary exertions to relieve pain, as in other convulsions: and the increase of irritability to external stimuli, or of sensibility during sleep, must occasion them to commence at this time.



winds, or has been abroad in thick foggy weather, or has got wet, or continued long in a damp place under ground, or has taken food which the stomach could not digest.

The paroxysm is commonly ushered in with a listlessness, want of sleep, hoarseness, a cough, belching of wind, a sense of heaviness about the breast, and difficulty of breathing. To these succeed heat, fever, pain of the head, sickness and nausea, great oppression of the breast, palpitation of the heart, a weak and sometimes intermitting pulse, an involuntary flow of tears, bilious vomiting, &c. All these symptoms grow worse towards night; the patient is easier when up than in bed, and is very desirous of cool air.

After some nights passed away in this manner, the fits at length moderate, and suffer more considerable remissions, particularly when they are attended by a copious expectoration in the mornings, and when this continues from time to time, throughout the day; and, the disease going off at last, the patient enjoys his usual rest by night without further disturbance. The pulse, during the fit, is usually not much affected, but in a few cases there is a frequency of it, with some degree of thirst and other febrile symptoms.

*Regimen.*—The food ought to be light and of easy digestion. Boiled meats are to be preferred to roasted, and the flesh of young animals to that of old. All windy food, and whatever is apt to swell in the stomach, is to be avoided. Light puddings, white broths, and ripe fruits baked, boiled or roasted, are proper. Strong liquors of all kinds, especially malt liquor, are hurtful. The patient should eat a very light supper, or rather none at all, and should never suffer himself to be long costive. His clothing should be warm, especially in the winter season. As all disorders of the breast are much relieved by keeping the feet warm, and promoting perspiration, a flannel shirt or waist-coat, and thick shoes, will be of singular service.

But nothing is of so great importance in the asthma as pure and moderately warm air. Asthmatic people

can seldom bear either the close heavy air of a large town, or the sharp keen atmosphere of a bleak hilly country: a medium, therefore, between these is to be chosen. The air near a large town is often better than at a distance, provided the patient be removed so far as not to be affected by the smoke. Some asthmatic patients indeed breath easier in town than in the country; but this is seldom the case, especially in towns where much coal is burnt. Asthmatic persons who are obliged to be in town all day, ought at least to sleep out of it. Even this will often prove of great service. Those who can afford it ought to travel into a warmer climate.—Many asthmatic persons who cannot live in Britain, enjoy very good health in the south of France, Portugal, Spain, or Italy.

Exercise is likewise of very great importance in the asthma. The blood of asthmatic persons is seldom duly prepared, owing to the proper action of the lungs being impeded. For this reason such people ought daily to take as much exercise, either on foot, horseback, or in a carriage, as they can bear.

*Treatment.*—Almost all that can be done by medicine in this disease, is to relieve the patient when seized with a violent fit. This indeed requires the greatest expedition, as the disease often proves suddenly fatal. During the paroxysm the body is generally bound, a purgative clyster, with a solution of asafoetida, ought therefore to be administered, and if there be occasion, it may be repeated two or three times. The patient's feet and legs ought to be immersed in warm water, and afterwards rubbed with a warm hand, or dry cloth. Bleeding, unless extreme weakness or old age should forbid it, is highly proper. If there be a violent spasm about the breast or stomach, warm fomentations or bladders filled with warm milk and water, may be applied to the part affected, and warm cataplasms to the soles of the feet. The patient must drink freely of diluting liquors, and may take a tea-spoonful of the tincture of castor and saffron mixed together in a cup of valerian tea, twice or thrice a day. Sometimes a vomit

has a good effect, and snatches the patient, as it were, from the jaws of death. This, however, will be more safe after other evacuations have been premised. A very strong infusion of roasted coffee is said to give ease in an asthmatic paroxysm.

In the moist asthma, such things as promote expectation or spitting, ought to be used; as the syrup of squills,\* gum-ammoniac, and such like. A common spoonful of the syrup or oxymel of squills, with an equal quantity of cinnamon-water, may be taken three or four times through the day, and four or five pills made of equal parts of assafoetida and gum ammoniac at bed-time.†

A combination of fox-glove and opium has proved highly advantageous in spasmodic asthma, when given in the dose of half a grain of each four or five hours. In the pituitous asthma, squill and fox-glove might be more advisable.‡ On the authority of a modern writer, galvanism was found most efficacious in relieving habitual asthma.||

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* Take	Mixture of Ammoniacum,	4 ounces.
	Oxymel of squills,	3 drachms.
	Solution of Antimony Wine,	40 drops.
	Distilled Vinegar,	½ ounce:

Make a mixture; of which two table-spoonfuls are to be taken often, or when either the cough or shortness of breath is troublesome. Or,

Take	Mixture of Ammoniacum;	1 ounce.
	Solution of Acetated Ammonia,	2 drachms.
	———— Tartarized Antimony,	15 drops.
	Syrup of Tolu,	1 drachm.

Make draught to be taken every six hours.

† After copious evacuations, large doses of ether have been found very efficacious in removing a fit of the asthma. I have likewise known the following mixture produce very happy effects: To four or five ounces of the solution or milk of gum ammoniac, add two ounces of simple cinnamon water, the same quantity of balsamic syrup, and half an ounce of paregoric elixir. Of this two table-spoonfuls may be taken every three hours.

‡ Take	Foxglove in powder,	6 grains.
	Compound Squill Pill,	2 scruples.
	Syrup of Tolu, enough to make the mass into 12 pills, one to be taken three or four times a day.	

|| See Experimental Inquiry into the Laws of the Vital Functions, &c., by A. P. Wilson Philip, M. D. p. 329.



For the convulsive or nervous asthma, antispasmodics and tonics are the most proper medicines. The patient may take a tea-spoonful of the paregoric elixir twice a day. Bitter infusions, chalybeate waters, and preparations of iron, particularly the subcarbonate and sulphate, in short, every thing that braces the nerves or takes off spasm, may be of use in a nervous asthma.

[The smoking of the leaves and root of the Jamestown-weed (*datura stramonium*) is strongly recommended as an expectorant and antispasmodic in this disease. The skunk cabbage is also highly extolled by many who have given it a trial. The dose of the dried root, in powder, is from thirty to forty grains, repeated as often as circumstances may require. "Of all the remedies we possess, however, the *lobelia inflata* is, I think, decidedly the most beneficial."—(Eberle.) A table-spoonful of the saturated tincture may be given every ten or fifteen minutes.]

In addition to other tonics, exercise either in swinging, sailing, riding in a carriage, or on horseback, but particularly the latter, together with a change of air, will be beneficial to asthmatics: they should try different situations to live in, where the disease is rendered less distressing, or is entirely removed. Their clothing should be warm.

In the arthritic asthma, arising from the retrocession of gout, there are usually intermissions and other irregularities of the pulse, great anxiety of countenance, with a blush tinge thereon. Large doses of opium, ether, camphor, and ammonia are the medicines most likely to afford relief. Sometimes it is necessary to bleed the patient, and often to apply a blister to the chest.

In every species of asthma setons and issues have a good effect, they may either be set in the back or side, and should never be allowed to dry up. We shall here, once for all, observe, that not only in the asthma, but in most chronic diseases, issues are extremely proper. They are both a safe and efficacious remedy; and though they do not always cure the disease, yet they will often prolong the patient's life.



This disease, though so common with us, is little known in mild climates; and, on that account, it is always advisable to try the effect of a change of climate, which has generally been attended with great benefit. I have already intimated what little confidence I had in the power of any medicine to perform a radical cure of the asthma; but there are many things that will give the patient ease, and, of course, tend to prolong his life. Much, also, may be done by regimen, when drugs are of little service; and I would therefore advise asthmatic patients to procure and keep by them rules for their management both in and out of the fit, adapted to their particular cases. By a proper attention to such rules a man may live many years, and enjoy tolerably good health.

I had a patient some time ago, who was often carried home to his wife in an apparently dying state. She felt little alarm, well knowing what was necessary to be done, and she always brought him about. This good woman did no more than may be done by any woman of common sense, if the doctor will deign to instruct her. General rules will not do; they must, as before observed, be suited to the patient's case and constitution. For want of some such instructions, which a physician should take the earliest opportunity to give, a patient may lose his life before the doctor can be sent for, or any other medical advice or assistance procured.

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## HEART-BURN.

*Symptoms.*—A burning sensation about the pit of the stomach, with acid eructations, flatulence, and sometimes retching to vomit.

*Causes.*—A relaxed state of the stomach, generating acidities and acrimonies from food too long detained. As it is often a symptom of indigestion, the cause may be found under the head of the following chapter.

*Treatment.*—The first indication is to remove the unpleasant sensations existing, which may be done by taking either a small tea-spoonful of salt of tartar, or a table-spoonful of magnesia in a glass of mint-water or tea; or a tumbler of mucilage of gum Arabic or flax-seed tea taken cold, with a small piece of liquorice ball dissolved in it. But, to cure the disease effectually, after an emetic give the lime-water, or ten grain of the rust of steel, thrice a day for some time, and keep the bowels moderately open with magnesia or the root of rhubarb chewed occasionally, or the tincture of it, taken in small doses; or the alætic pill.

If it should arise from bile, lemonade, or some of the vegetable acids, or a tea-spoonful of the spirits of nitre in a glass of the infusion of Columbo, will often afford immediate relief.

When not arising from the contents of the stomach, general warmth, particularly of the feet, is essentially useful; and even rubbing them with flour of mustard, or tincture of Cayenne pepper, has produced good effects. Great benefit has also been experienced, and sometimes a complete cure effected, by the application of a blister to the pit of the stomach. To render it the more efficacious, the blister should be kept running for at least a week.

*Treatment.*—The diet of those who are subject to this complaint, should consist chiefly, of animal food; and all fermented or acid liquors and greasy aliment must be strictly avoided. A glass of brandy, or gin and water after dinner, is the best beverage. Moderate exercise is particularly beneficial.

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#### CHOLERA MORBUS, OR PUKING AND PURGING.

This disease is generally produced by the food becoming rancid or acid on the stomach; and if from an over-quantity of bile, the purging and puking will show it, by the discharges being intermixed with a dark bil-

ious matter. This disease is also produced from breathing damp air; or from being exposed to inclement weather; or from getting the feet wet; but mostly from eating such food as disagrees with the *stomach and bowels*. The mind has a powerful influence in this complaint; and I have frequently observed in my practice, that the disease was produced in many cases of females in delicate health, by the passions of the mind, as well as by sudden stoppages of the menstrual discharge. The disease generally commences with sickness of the stomach; painful griping, succeeded by heat and thirst, quickness and shortness of breathing, with a quick and fluttering pulse. When the case is dangerous, the extremities become cold; the perspiration or sweat is clammy and cold; there is also cramp, and great changes and irregularities of the pulse, which, when accompanied with *hiccups*, are strong evidences of the approach of death.

*Treatment.*—Apply to the stomach and belly, cloths steeped in warm water, or in spirits in which camphor has been dissolved; or you may apply a warm poultice, made of garden mint stewed; or a poultice made of mustard and strong vinegar will be found of great service applied to the stomach; or a blister of cantharides or Spanish flies: and in extremely dangerous cases, where it is not practicable to draw a blister in the usual way, do not hesitate to *scald the part* with boiling water; at the same time applying hot rock or brick to the feet. Give hot whiskey toddy, or that made of any other kind of spirits; let it be strongly mixed with peppermint, or ginger, or calamus; and let chicken water or thin gruel be freely taken by the patient. Give clysters made by pouring boiling water on the inner bark of slippery-elm, or those made of flax-seed tea, either of which must be thrown up into the bowels milk-warm. See under the head of clystering, for the manner of administering this operation. The first object in this dangerous complaint, is, to cleanse the stomach and bowels of any offensive matter, after which the giving

of thirty-five or forty drops of laudanum in mint tea will be proper; and if these should not arrest the progress, make a clyster of a tablespoonful of starch and a half pint of warm water, in which put a teaspoonful of laudanum, and throw it up the bowels as directed under the head "clysters." If this does not give relief in fifteen or twenty minutes, repeat it again—and again.

If the person who is attacked is of full habit, that is fat, stout and vigorous, the loss of some blood by the arm, and the warm bath will be necessary. If the attack be moderate, a good dose of calomel will generally put a stop to it—for this will evacuate the bowels, operate as a stimulus, and remove the diseased action.

Very frequently this disease appears as a symptom of fever; and then of course you are to treat it as you would any other kind of fever. In all cases, after using laudanum to relieve your patient, particularly when you have used it to any extent, it is proper and necessary to give, *after relief*, a good dose of castor oil. Persons who are subject to this sudden and dangerous disease, should be cautious as to what kind of food they indulge in; and should be very particular in avoiding the causes which produce it; because by imprudence, the disease may return with double violence and danger.

The rapidity with which *cholera morbus* proceeds, requires the remedies to be promptly applied; for the disease is generally speaking, highly dangerous, and soon terminates the life of the sufferer, unless relief is speedily obtained. A few hours' suffering, in severe cases, weakens the patient surprisingly; and therefore, you will easily see the great importance of nourishment of a light, stimulating, and strengthening kind being given. Besides attention to nourishing diet, wine with any kind of bitters ought to be given, or cold camomile tea three or four times a day, the dose a wine or stem glassful, or elixir vitriol, ten drops three times a day, in a tea made of black snake-root, or Virginia snake-root: besides all which, flannel ought to be put on next the skin of the patient.

But, in concluding my remarks on the treatment of



this complaint, I must urge the particular necessity of the warm bath and clysters, as almost certain means of relief, if properly and timely administered.

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#### DRINKING COLD WATER, WHEN OVER-HEATED.

The imprudent use of cold water when a person is over-heated, almost invariably produces cramps or spasms of the stomach, which usually terminate in death. In the year 1816, I saw five persons expire in less than ten minutes, in the city of New York, from drinking cold water; in truth, the deaths became so frequent at the different watering places throughout the city, that placards or printed bills were ordered by the city council to be stuck on the different pumps, to caution all persons against drinking cold water when over-heated and bathed in sweat. This dangerous and fatal practice, if it even does not produce immediate death, almost invariably lays the foundation of lingering and destructive diseases, which are extremely difficult of cure. That eminent and distinguished physician, Benjamin Rush, describes the causes of fatality in these cases, in the following manner: "When large quantities of cold water are suddenly taken into the stomach, under circumstances of an over-heated system, the person in a few minutes afterwards loses his sight, and every thing appears dark about him; he staggers in attempting to walk, and unless supported, falls to the ground; the breathing soon becomes very difficult and a rattling noise is soon heard in the throat; the feet and hands become cold, and the pulse cannot be felt—and generally in about five minutes, death is the consequence, unless speedy relief can be obtained." Iced toddy, when taken under the same circumstance of being over-heated, has often been known to produce the same fatal effects; and I have known many instances, in which ladies in full health, have been brought to the brink of eternity in a few minutes, from eating

*ice-cream* when over-heated by dancing. The truth is, that very cold articles of food or drink, even when the body is moderately cool, sometimes, in peculiar constitutions, are productive of dangerous consequences; cases which are not very violent, and which come on with cramps or spasms, should be immediately attended to, or they will also terminate fatally in most instances, by inflammation of the stomach,

*Treatment.*—"I have discovered," says Dr. Rush, "but one certain remedy in this desperate, and if not immediately relieved, fatal disease—this remedy, and it may be relied on, is laudanum; which has to be given in the quantity, of from a tea to nearly a table-spoonful immediately in violent cases, before relief can be obtained." When laudanum cannot be had in time, a glass of strong whiskey or brandy, one of which is generally found forthcoming every where, may be given. Laudanum, however, is so easily made, and so frequently necessary in all families, that it ought always to be kept in preparation for use: it will frequently save the expense of sending for a physician at an unseasonable hour, and oftentimes save life in sudden and desperate cases. For the mode of preparing it, see under the head laudanum. Every person about to drink cold water, when warm in high perspiration, should observe faithfully the following rules. First, pour quantities of water on the wrists; and next, wash the face, temples and hands, with water, and suffer them to dry. These measures from the coldness of the water applied, and the evaporation which succeeds, will abstract or draw from the interior of the body, and particularly from the vital parts, a considerable portion of heat; and prevent the sudden and dangerous action of the cold on the stomach, and other vital parts of the system. You are, also, when you drink, to take the water in small quantities at a time; in fact, not more than half a pint at once; repeating the draughts about every five or ten minutes. It would be the safest plan, even with the above precautions, to mix some spirits with the water. Farmers engaged in harvesting their

grain, should always let the water remain sometime in the vessel before using it—many fatal diseases have originated, in an imprudent disregard of this cautious practice.

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## DROPSY.

Dropsy is a disease of the whole system, arising from debility or weakness, and can easily be distinguished from other diseases, by the collection of water in some part of the body. By pressing the fingers on the flesh with some force, a depression or pitting will take place, which can be seen some little time after the fingers have been removed: in other words, the flesh will have lost its elasticity, and will not immediately spring back, on the removal of a pressure. Or, if the water is lodged in any particular cavity of the body, it may also be heard distinctly, on any sudden change of position, or rapid movement of the body. Among physicians, it is called by different names, according with the different parts of the system, in which the water may be deposited. When the water is seated in the cavities of the head or brain, the disease is called *hydrocephalus*; when seated in the cavity of the chest, it is *hydrothorax*; when in that of the belly, *ascites*; when seated in the scrotum or bag of the privates, it is called *hydrocele*; and when the water is diffused in the cellular membrane, which is the thin and delicate skin found among the muscles or flesh of the body, and which is the same that butchers blow up in their veal and mutton, the dropsical disease is called *anasarca*. There is strong resemblance between dropsy of the testicle or stone in men, and *ascites ovarii* in women—the latter being small collections of dropsical fluid in the *ovaria*, which are two oval flat bodies, which are about an inch in length, and half an inch in breadth, situated an inch behind the womb, and which are supposed to contain and supply whatever the female brings to procreation

or formation of the fœtus or child. This is proved from analogy, by the simple fact that an animal deprived of the *ovaria*, as in the case of spaying swine, loses all power of conceiving, and all venereal desire. I omitted to mention, that *hydrocephalus*, or dropsy of the brain, is a disease common to children, and will be treated of under the proper head. I have, in the first instance, and contrary to the impressions of some medical men, given it as my decided opinion, that dropsy is a disease of the whole system, and my reader may be assured, that I am sustained in that opinion by many of the most distinguished physicians in the United States.

*Treatment.*—More diseases of dropsy have been removed by bleeding, and more relief has been obtained from it, than from any other known remedy, for which reasons, it is now considered as satisfactorily proved, that this complaint is more frequently inflammatory than was generally supposed. For this very important information, we are indebted to that highly distinguished physician, Doctor Benjamin Rush. Bleeding must be entirely regulated, as to frequency and quantity, by the relief it affords to the patient. In my practice, I always use it freely; and never omit, at the same time, to purge freely with calomel and jalap—*see table for dose*—or jalap alone. If these purges operate without pain, and the stools are fluid or watery, and your patient is not much weakened by them, it does not matter how many stools are produced daily; because the remedy is an efficient and proper one. One ounce of cream tartar, in half a gallon of water, drank during the day, will be of much service: in truth, all articles which will increase the flow of the urine or water from the bladder, called by physicians *diuretics*, are very useful in this complaint. The following cures, which I shall notice in the words of an experienced and distinguished man, give evidence of the correctness of some of my introductory remarks, among which are the following:—“The discoveries of each succeeding day convince us that the Almighty has graciously furnished man with



the means of curing his own diseases, in all the different countries and climates of which he is an inhabitant; and there is scarcely a day, month, or year, which does not exhibit to us the surprising cures made by roots, herbs, and simples, found in our own vegetable kingdom, when all foreign articles have utterly failed," &c. The truth is, that the wise and beneficent Creator of the universe, has made nothing in vain; and the time will come, when the apparently most useless and noxious plants will be found eminently useful in the cure of diseases which have hitherto baffled the profoundest skill, and the most powerful energies of genius. The following are the words of the author just alluded to: "I am knowing to two extremely distressing cases of dropsy, being entirely relieved by means of the bark of common elder. One, a woman advanced in age, in the last stages of this disease, who lost a brother some short time previous, by the same complaint. The other, a young woman, who had been for eighteen months confined to her bed, during four of which she was unable to lie down, and who is now wholly free from dropsy, and recovering strength in a most surprising and unexpected manner. A great many other cases, less aggravated, have been cured by the bark of the common elder; I have used it myself with universal success, and its immediate adoption by the afflicted, is truly important and deserving attention. The receipt is as follows: Take two handfuls of the green or inner bark of the white common elder, steep them in two quarts of Lisbon wine twenty-four hours—if this wine cannot be had, Teneriffe or Madeira will answer; take a gill every morning fasting, or more if it can be borne on the stomach. The bark and leaves of the elder, have long been known as powerful evacuants. I ought to have said, in the proper place, that the young woman I have mentioned, used the elder barked wine, at the instance of one of the most distinguished physicians of Boston; who had previously tried every known prescription without success, and that the use of the elder entirely cured her."

The following remedy, handed to me by a respect-

able man, who resides in Roane county, Tennessee, Mr. William Mead, will undoubtedly be worthy of trial, and I therefore submit it to the reader: "Take two or three handful of rusty nails, and put them into half a gallon of good apple vinegar; then boil, or rather simmer the vinegar, down to a quart, and strain it well through a linen cloth: next, add to the vinegar a quart of molasses, a handful of camomile flowers, and a handful of lavender from the garden. Boil or stew this mixture down to a quart. The dose for a grown person is a large table-spoonful, to be increased gradually to one and a half, the dose, of course, must be smaller for younger and more weakly persons." The character of Mr. Mead for integrity and veracity, and his solemn assurances that the prescription has often been eminently successful, induce me to place it on record. The oxide of iron, in other words, rust of iron, would probably answer a better purpose than the nails mentioned by Mr. Mead.

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### SCURVY.

This disease is frequently of a highly putrid nature, and generally afflicts persons who have lived a considerable time on salted provisions, or unsound and tainted animal food. Those are also subject to it, who have been long confined without due exercise: those, also, who have been unable to obtain vegetable food for a considerable period. Cold moist air, bad water, the morbid influence of depressing passions, such as grief, fear, &c., and the neglect of personal cleanliness, will also produce scurvy. With regard to cleanliness, I must speak in plain terms. Neglect of personal or bodily ablutions, or, in other words, washings among females at particular periods, are in reality the causes of very many cases of scurvy: and here I am compelled to say, that such are the cleanly habits of the French of the better order, male and female, I have never

known a single case of scurvy among them, although much accustomed to their society in Europe—they are in the constant habit of using the warm bath. The disease called scurvy can always be known by the softness and sponginess of the gums, which even on being gently rubbed with a soft sponge, will invariably bleed. Ulcers next form round the teeth, and gradually eat away the lower edges of the gums, by which the teeth become loose, and sometimes fall out. The breath is always offensive, and smells badly; the face is usually of a pale yellow color, and considerably bloated; the heart palpitates, or beats rapidly and irregularly, on slight exertion; the legs and feet swell—small ulcers or sores break out on different parts of the body, and more generally on the legs; pains are felt over the whole body; the urine or water is high colored; the stools smell very badly; the strength becomes very much reduced, and bleeding takes place at the nose, ears, gums, and fundament. When these last symptoms take place, the sufferer is near the termination of his earthly career: and it is no less singular than true, that the appetite remains good to the last, together with a perfect retention of memory.

*Treatment.*—The scurvy prevailed in our Army in 1809 at Camp Terre au Boef, 15 miles below New Orleans, and when the army ascended the Mississippi to Natchez, and Washington, a small town six miles from Natchez, it still prevailed with great violence. I found at Washington in great abundance the scurvy grass as it is called, and caused the sick to use it with marked advantage, the men were very fond of it and devoured large quantities.

All the acids are valuable medicines in scurvy; such as common vinegar with fresh vegetables; in fact a bath made of vinegar and water, in which the whole body can be frequently bathed, will be of essential service; as will also the plentiful use of ripe fruits. Sour Kront, or pickled cabbage, is so excellent a remedy in scurvy, that a Dutchman, whose name I have forgotten, received a large premium from the British Government,

for introducing it into the English Navy. When there is much debility, the moderate use of good old wine will be proper; as will also the use of nitric acid: see diseases of the liver, where you will see this medicine plainly described, together with its effects, by which the bowels will generally be kept sufficiently loose, at the same time that the system will be strengthened. If, however, the bowels should be bound, dissolve a table-spoonful of cream tartar in a pint of boiling water, and when cold use it as a drink. I must not omit to mention, emphatically, that regular exercise is absolutely necessary in this complaint. You will find the following medicine, also, a good remedy: dissolve three ounces of common salt-petre in a quart of good vinegar, and take one or two tablespoonfuls three or four times a day; or less quantities if the state of your patient will justify it. When the gums are much swollen, with considerable ulceration, and the mouth, teeth, and breath have a fetid or bad smell, the mouth must be frequently washed with water, prepared as follows: boil red-oak bark in water, then strain the water well, and in it dissolve a lump of alum, to which add a teaspoonful of finely powdered charcoal, which is to be prepared by burning common smith's coal over again. I have omitted to state, that if the breathing is difficult, or there is much pain in the breast, a blister should be applied on the chest over the pain; you are never to bleed in scurvy, if you do, you will lose your patient. Pure air, moderate, yet sufficient exercise, and the warm bath of pleasant temperature, with a sufficiency of vinegar in it, will restore your patient.

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## WHITLOW.

This is an inflammation at the end of the finger or thumb. The pain gradually increases, attended with a throbbing sensation, and always produces in its progress the most excruciating torment. In whitlow, the finger



or thumb affected always puts on a glossy or shining appearance. After six or eight days, matter forms under the nail at the side of it, when, on being opened, gives immediate relief.

*Treatment.*—The old plan of treatment in whitlow has been entirely laid aside; it consisted merely of poultices and warm applications. The method of cure now adopted in the European hospitals, which may be said to be an infallible one, is simply as follows: The moment the whitlow is discovered, press the part gently and gradually with your thumb and fore finger; then with a piece of tape or narrow binding, bind or wind the sore finger or thumb tightly, from the point upward toward the body of the hand. This bandage must be permitted to remain on, the object being merely to stop the circulation, until a cure is effected. You may unwind it once a day to examine the whitlow, but it must immediately be put on again. If the bandage give much pain, so that you cannot bear it, it must be gradually loosened until you can bear the pressure. By this simple method, whitlow may be easily cured, if matter has not formed in it. Were I not convinced, that many wise men and old women will laugh at this simple cure, I would not put myself to the trouble of proving its efficacy. Doctor William Balfour, of Edinburgh, relates more than fifty cases of whitlow being cured, some of them with matter formed and highly inflamed, by this simple method. I will give two cases of success, selected from the London Medical and Physical Journal.

“James Bridget,” says the writer, “who was a tanner, aged twenty-five years, applied to me on the 25th of August, with a whitlow on one side of this thumb. He knew no cause for the complaint, which had existed about a week, and prevented him from following his occupation. When I had pressed the parts firmly, and applied a bandage, I desired him to call the next day. He looked at me as if he would have said—“Is this all that you are to do for me?” I found this fellow,” says the Doctor, “quite doubtful with regard to my cure, and

again desired him to call the next day. In the morning he accordingly returned, when I found the inflammation and swelling considerably abated. On the third day the pain was entirely gone, and the man had the free use of his thumb. I now asked him if he was not at first quite distrustful of the mode of cure I had adopted; he laughed, and admitted that he was, expressed his surprise at the quick result; made his acknowledgments, and went about his business.

Peter Fraser received an injury on the 26th of December last, by having his thumb bent forcibly backward in lifting a heavy stone. When he applied to me on the 29th, he complained of having passed three days in great agony, and three sleepless nights. The pain was confined to the first joint, but the swelling extended a considerable way upward. I never handled a more excruciatingly painful case, and believed it must soon terminate in *suppuration*," breaking and running.—Such was also the opinion of Dr. Anderson of New York, who happened to be with me when the patient presented himself. I told that gentleman, that exquisitely painful as was the complaint, I had no doubt of curing it in a week, without any other application than my own fingers, and a simple bandage of narrow tape. The cure was completed in six days, inclusive of that on which the patient applied to me." I have thus given two cases, in which whitlow has been cured by the mere application of a bandage; and I will adventure another suggestion, which is this, that even in cases where suppuration has actually taken place, and the lancet has been used, the use of an easy bandage would be greatly beneficial, applied to every part of the finger or thumb, except immediately over the small point of discharge.

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## GOUT

Is often hereditary, but, generally, indolence and luxury, the hated parents of this disease, which righteous

Heaven has marked with such severity, that, like the leprosy of Naaman, it is hardly ever curable.

But though art has not often succeeded to cure the gout, yet it has discovered a variety of means to shorten the fits, and to render them much more tolerable.

*Symptoms.*—The gout mostly affects the joints, but the viscera are not exempt from its ravages. It sometimes comes on suddenly, passing from one part of the body to the other, in the twinkling of an eye; but generally is preceded by indigestion, flatulency, loss of appetite, unusual coldness of the feet and legs, with frequent numbness, sense of pricking, and cramp. These symptoms take place several days before the paroxysm comes on, but commonly the day preceding it, the appetite becomes greater than usual. The next morning, the patient is roused from his sleep, by an excruciating pain in the great toe, or ball of the foot, resembling the gnawing of a little dog.

*Treatment.*—No matter what part of the body this disease first seizes, the lancet will be required in every case where there is an increased action of the pulse, to take off the inflammatory disposition. The extent to which the blood-letting must be carried, can only be ascertained by the violence of the disease, and the sex and constitution of the patient. In this, as in all inflammatory fevers, the bowels ought to be kept open freely by laxative medicines, as castor oil, sulphur, cream of tartar, rhubarb, senna, jalap, or calomel. Indeed, a fit of the gout may be oftentimes entirely, and is almost instantaneously, removed by active purging. Even drastic purges need not be dreaded in this disease.

Nitre, with diluting liquors given in such quantities as to excite a gentle perspiration, are of great utility in the inflammatory stage of the disease. After the action of the pulse is somewhat reduced by evacuations, blisters over the pained parts are greatly to be relied on.

As soon as the inflammatory state of the gout has subsided, stimulants and tonic medicines, as bark and steel, are the best remedies. Laudanum, ether, good

French brandy, and aromatics, as calamus, ginger, Virginia snak-root, and red pepper, (*see Materia Medica*), in the form of teas, are all exceedingly useful in this feeble state of the disease, especially when it affects the stomach or bowels. Besides these internal remedies, friction on the stomach and bowels, or the application of cloths wrung out of hot spirits or water, over the pained parts, and sinapisms to the feet, should be employed whenever the gout attacks the head, lungs, bowels, or stomach.

Gentlemen long in the habits of intimacy with this disease, should remember that it is of immense rudeness, and ready on the slightest provocation to quit the toes and knuckles, and seize on the very stomach and bowels of its best friends. They should, therefore, be constantly on their guard, and keep always by them a vial of ether or laudanum, or a case of good old French brandy; the latter of which is admirable for chasing the gout from the stomach.

The white hellebore, (*see Materia Medica*.) is highly extolled as a remedy in this distressing disease.

**Regimen.**—The diet should be regulated according to the state of the patient. If feverish, and of a plethoric habit, the lightest diet ought to be used. If debilitated and of a relaxed habit, generous diet should be allowed. Exercise, although painful at first, must be freely taken.

**Prevention.**—If the person be plethoric, and has been accustomed to drink freely of wine, and eat heartily, he should gradually diminish the quantity of the aliment; particularly every spring and fall, as the disease is more liable to recur at those seasons than at any other time. But in debilitating habits predisposed to the gout, a stimulating diet is most proper, assisted with the use of the rust of steel, bitters, or bark; in every case, costiveness should be avoided; and flannel worn next to the skin is peculiarly proper; nothing, however, prevents this disease, more than temperance and exercise.



## ERUPTIONS OF THE SKIN.

There subsists so intimate a relation between the internal and external parts of our body, that no disorder scarcely takes place within, that does not show itself ultimately on the surface.

Diseases of the skin are therefore very numerous, and, as they most commonly arise from a constitutional cause, should be treated by general remedies.

Local applications, particularly *quack* remedies, which are composed of mineral poisons, by repelling the vitiated humors to the brain, lungs, or bowels, have often produced fatal consequences.

Persons of relaxed habits, especially females, are subject to an eruption, attended with redness and soreness of the skin, forming large spots on the face and neck. This is certainly the mark of a constitutional debility, and can only be removed by tonics; as the bark, bitters, solution of arsenic, nitric acid, &c., and exercise. Attention should also be paid to a frequent change of linen, and the skin occasionally dusted with starch.

Cutaneous eruptions oftentimes arise from a foulness of the stomach, in which case, occasional vomiting and purging are found to be highly useful.

There are eruptions in the face of persons of apparent health, called *grog blossoms*, which are the consequence of an inflamed liver, from a too frequent use of wine and spirits and high living.

An attempt to remove these impulses by external means, would not only be fruitless, but highly dangerous. Their cure can only be effected by gradually correcting the habits of intemperance, both in eating and drinking.

The primary affection must be first relieved. This is to be done by taking, every night, from half a grain to one grain of opium, combined with two grains of calomel. After using this medicine for some time, or until the mouth is affected by salivation, the nitric acid

diluted, (*see Dispensatory*,) in its usual doses, will complete the cure.

Scaly affections of the skin, or clusters of small pimples over the body, usually occur, in some habits, in the spring and fall, which will generally yield to sassafras tea, or cream of tartar and sulphur, in doses of a table-spoonful, night and morning. Should this fail, the decoction of sarsaparilla, and one of the mercurial pills, night and morning, for a week or two, and afterwards, the solution of arsenic will always succeed.

The *Prickly Heat*, is an eruption which is sometimes very troublesome, but commonly disappears on keeping moderately cool, and avoiding warm drinks. When this is not sufficient, and the itching is severe, the cathartic mixture taken two or three times a week, and the external applications of elixir vitriol diluted in water, or the itch lotion, (*see Dispensatory*,) with the addition of a little more water, will prove a good remedy.

The *Nettle Rash*, so called from its resemblance to eruptions, made by the stinging of nettles, is sometimes attended with intolerable itching. When many of the eruptions run together, the parts seem swelled, forming tumors, such as appear after being struck with the lash of a whip, and betwixt them, the skin is inflamed and very red. The elevations appear suddenly but seldom continue long, and are apt to disappear from one part of the body, and appear again in another.

The itching is the greatest inconvenience, as it sometimes prevents the patient from sleeping, but the disease is not dangerous.

With respect to the cure, observing a cooling regimen and a laxative state of the bowels, is generally sufficient; but if fever supervene, it will be proper to bleed and give the antimonial solution in small doses, to determine the fluids to the surface. When the disease is of a chronic nature, and often returns, twenty drops of elixir vitriol, taken thrice a day, in a cup of camomile or centaury tea, or the infusion of Columbo, should be directed.

To allay the itching, a solution of borax, in vinegar, an ounce of the former, to half a pint of the latter, affords a good wash.

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### ITCH.

The itch consists of small watery pimples of a contagious nature, which first appear between the fingers, and on the wrists, but in process of time, spread over the whole body, except the face, attended with a great degree of itchiness, especially after heated by exercise, or when warm in bed.

In the cure of this disease, sulphur, used internally and externally, is considered as a certain specific. A teaspoonful of the flour of sulphur, taken in milk, or spirits and water, thrice a day, and some of it rubbed on the inside of the arms and legs at bed-time, either dry or in the form of unction, will soon effect a cure. Where the sulphur is disliked, the mercurial ointment may be rubbed in every night about the size of a nutmeg, until the eruption entirely disappears. The itch lotion, (*see Dispensatory.*) will also be found an effectual remedy in this complaint, by washing the parts affected with it two or three times a day. The internal exhibition of sulphur alone, or combined with cream of tartar, should always precede or accompany the external applications. Dock-root, tobacco, and Virginia snake-root, (*see Materia Medica,*) have sometimes cured when the above remedies failed.

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### TETTER OR RING WORM.

Is an eruption that attacks various parts of the skin, in a circle, with an inflamed basis, which gradually spreads, forming an extensive excoriation, sometimes

moist, at others dry, and is attended with smarting and itching, succeeded by scurvy scales.

**Treatment.**—If the habit of the body be not faulty, external applications alone, are often sufficient to remove this affection.

The saturated solution of borax, with vinegar or lemon juice, one drachm to an ounce of the acid, is an excellent remedy, without producing the least pain on its application. The itch lotion, when prepared with double its strength, is also equally good. Covering the eruption daily with ink, or the juice of black walnut, (*see Materia Medica*), has often effected a cure.

When the disease is inveterate, internal medicines must be exhibited and continued for some time, such as lime-water, flour of sulphur, the mercurial pills, or, which is preferable to all of them in obstinate cases, the solution of arsenic. (*See Dispensatory*.)

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#### TINEA OR SCALD HEAD.

**Symptoms.**—This disease consists of little ulcers at the roots of the hair, which discharge a humor that dries into a white scab, or thick scales, and has an offensive smell. It is not only a very troublesome complaint, but contagious, and, when united with a scrofulous constitution, is found extremely difficult to be cured.

**Treatment.**—When it is merely a complaint of the skin, it may be successfully treated with topical applications. In the beginning of the affection, washing the sores well, night and morning, with strong soap-suds, or a decoction of tobacco, or by applying an ointment, made of Jamestown-weed, or pride of China, (*see Materia Medica*), will frequently effect a cure. But if the disorder prove obstinate, the head ought to be shaved; and after being well washed with soap-suds, covered with tar and suet, spread on a bladder. My very ingenious friend, Dr. Chapman, has assured me, when



every other application failed in removing this disease, he always succeeded, by having the affected parts washed with the following lotion, twice a day:—Take liver of sulphur, three drachms; Spanish soap, one drachm; lime-water, eight ounces; rectified spirits of wine, two drachms: mix.

But, in cases where topical applications are resisted, medicine should be given internally, as lime-water, flour of sulphur, or calomel, according to circumstances; and, to hasten the cure, the course of the fluids may, in the mean time, be in part diverted from the head, by blisters or sinapisms.

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### SCROFULA, OR KING'S EVIL.

This disease is most frequently among the children of the poor, and negroes, who are ill-fed, ill-lodged, and ill-clothed; it is also hereditary, but never contagious. It most commonly occurs in children from the third to the seventh year; frequently, however, it discovers itself at a later period in habits peculiarly disposed to it.

*Symptoms.*—It is known by indolent hard tumors of the lymphatic gland, particularly those of the neck, behind the ears, or under the chin. The upper lip, and division of the nostrils are swelled, with a smooth skin, and hard belly. In the progress of the disease, these tumors degenerate into ulcers of bad digestion, the discharge of which consists of a white curdled matter, resembling somewhat the coagulum of milk; and, previously to their breaking, they acquire a sort of purple redness, and a softness to the touch.

*Treatment.*—As soon as the tumors are first discovered, endeavor to disperse them by a sea bathing, or a bathing in salt and water, one pound to three gallons of water, or cold water alone, or by the frequent application of lead-water. Warm fomentations and poultices

of every kind do harm, as they seem only to hurry on a suppuration, which, if possible, should be prevented. A draught of sea water every morning is a useful drink. Peruvian bark and steel, used alternately every two weeks, or the nitric acid, will be of infinite service by giving tone to the system. The remedy, however, most to be depended upon in this disease, is the muriate of lime, given in doses of ten to eighty drops, gradually increased, three or four times a day, diluted with water or ter. When a suppuration takes place, the solution of arsenic should be given twice or thrice a day. The best application to scrofulous ulcers, is a powder composed of one pound of finely powdered bark, and one ounce of white lead in fine powder, mixed well together, or a fine powder of calamine stone alone, and the ulcers covered with it daily, keeping it on by brown paper and a bandage. Where these are not to be obtained, the constant application of linen rags, moistened with a solution of one ounce of sugar of lead, in a pint of water, may answer every purpose.

With respect to the diet, it should be nourishing and easily digestible, avoiding all viscid food. Moderate exercise, in a dry warm air, is exceedingly beneficial.

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### JAUNDICE.

*Symptoms.*—Yellowness of the skin, but chiefly of the eyes; the urine is also yellow: inactivity, anxiety and uneasiness at the pit of the stomach; itchiness of the skin.

*Causes.*—Whatever obstructs the passage of the bile, through its natural channel.

*Treatment.*—The indications of cure are, to remove the obstructions, which, as it originates from different causes, will require different modes of treatment.

As viscid bile is the most common cause of this complaint, in full habits, and where there are any feverish symptoms, begin the cure with bleeding, afterwards give an emetic, and then a day after, a dose of calomel and jalap, which, if necessary, should be often repeated. Common soap, in large quantities, has been exhibited with much success in this case; but, as this is disagreeable to take, the salt of tartar, which has the same advantage, or soda, may be taken in doses of twenty or thirty grains, three or four times a day, dissolved in the infusion of Columbo.

If there be any acute pain in the region of the liver, with a quickness of the pulse, bleed more freely, give one of the mercurial pills, (*see Dispensatory*,) night and morning, until a ptyalism be produced, use the warm bath, and apply a blister over the pained part. In cases of much pain, three or four tablespoonfuls of olive oil should be swallowed; and, if it do not succeed in quieting the pain, one or two tablespoonfuls of ether, or thirty drops of laudanum must be given. The warm bath, or bags of hot salt applied to the right side, are likewise beneficial. After the obstruction is removed, the Columbo or nitric acid, tonic powders or pills, or dogwood or cherry-tree bark, (*see Materia Medica*,) with porter and wine, are necessary to restore the tone of the system.

*Regimen.*—The diet ought to be regulated according to the constitution of the patient. In plethoric or feverish habits, the diet should be low; and in cases of excessive debility it should be of the most nourishing kind. Vegetables, by creating flatulency and acidity, are to be avoided. Mucilaginous drinks are peculiarly proper; and, in many instances, sucking a new-laid egg every morning, on an empty stomach, has succeeded in curing this disease, when all other means failed.

## WHITE SWELLING

Is distinguished by an acute pain, without any external inflammation, of a joint, attended with a gradual increase of its size. Though all the joints are occasionally subject to it, yet its most usual seat is the knee.

White swellings are generally of a scrofulous nature, but sometimes they are produced by rheumatic affections, and sometimes follow strains that have been neglected, or badly treated.

*Treatment.*—As soon as an affection of this kind is discovered, the patient should remain in bed, and the limb kept perfectly at rest, without which, remedies cannot produce any good effect.

The great object is to prevent the formation of matter, by the immediate application of leeches, or scarifications to the part affected, and by which, eight or ten ounces of blood may be taken away, every other day, or oftener, according to circumstances. The whole joint should then be kept continually wet and cold with the solution of crude sal-ammoniac, (*see Dispensatory.*) by means of four or five folds of linen. After the local affection is somewhat abated, frictions with the volatile liniment, or a mixture of soft soap and spirits of camphor, to which may be added some tincture of cantharides, will have a good effect. With one or other of these liniments, the joint is to be rubbed well twice a day, and afterwards covered with a piece of flannel that has been soaked in the same. If this should not produce good effects, the part must be rubbed night and morning with mercurial ointment, in the quantity of two drachms at a time, and continued until the mouth be greatly affected. The cure may then be completed by small blisters on each side of the joint, which should be kept running for a length of time.

If the disease in spite of these remedies continue to advance, emollient poultices must be applied often, until various abscesses appear, and these should be opened as



soon as they seem to point, afterwards to be treated as ulcers.

In cases where the white swelling is evidently scrofulous, tonic medicines, as bark, steel, &c., and a nourishing diet, to correct the constitutional affection, with stimulating applications to the joint, form the best remedies.

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### SEA SICKNESS;

*Symptoms.*—A most unpleasant giddiness, with great nausea and vomiting, occasioned by the motion of the vessel. The duration of this complaint is very uncertain. Generally, it lasts but a day or two, but in some cases it will continue a whole voyage.

*Treatment.*—Though time, perhaps, be the only cure, yet it will be greatly alleviated by keeping the bowels open. A teaspoonful of ether, in a glass of water, relieves the convulsive affection of the stomach. High-seasoned food, and acidulated drinks, are peculiarly proper. But nothing will be found more serviceable, than exercise, cheerfulness, and fresh air. Persons shou'd, therefore, never go below, but romp on the decks, cut capers in the shrouds, and divert their minds and move their bodies as much as possible.

A certain preventative of sea sickness is to go on deck, and look as far as the eye can reach, and watch for other vessels, by doing so, they become insensible to the motion of the vessel in which they are in.

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### INTOXICATION.

*Symptoms.*—Like every other kind of frenzy, it comes on with a burning redness of the cheek; a swelling of the jugular veins, and fiery wildness of the eyes.

The tongue is considerably affected, but very differently in different stages of the disease. At first, only glib and voluble—then *loud* and louder still—at length noisy and excessively disagreeable. The patient is now quiet on his top-ropes, and nothing goes down with him, but the most ranting songs, roaring laughs, ripping oaths, and the bluntest contradictions, accompanied with loud thumping of the fist on the table, especially if politics be the topic of conversation. There is no complaint that affects patients so differently: some it makes so ridiculously loving, as to hug and kiss one another; others it kindles into such rage and fury, that they will frequently throw the bottles and glasses at the head of their best friends. And, indeed, so wonderful is its influence, that it is no uncommon thing with it to inspire cowards with courage; to teach truth to liars, and to make persons naturally reserved, loquacious, and even boisterous.

The memory now partakes of the general infirmity, being hardly able to connect the parts of a story begun. The tongue, at length, as if about to lose its powers, begins to trip; then to stammer; and, at last, the utterance dies away, generally, in some idle half finished threat or oath. Hiccups now ensue, with a silly grin of the mouth, which continues half open, from the falling of the lower jaw. The face puts on an air of great stupidity—the eyes turn heavy and sleepy, and the patient begins to nod, with his head bending forward, until, becoming too heavy, he sinks under the table, and not unfrequently, after a filthy vomiting, falls asleep among the dogs and cats.

¶ *Treatment.*—In a fit of drunkenness, the patient should instantly be placed in an airy situation, the head and shoulders kept erect, and the neck cloth and collar of the shirt unbound, and copiously bled, if his situation seem alarming. The next step is to provoke vomiting, by the most expeditious means, such as tickling the throat with a feather or a finger. Cold applications to the head, as cloths wrung out of cold water, or vinegar and water, often renewed, will have the happiest effect;

so will plunging the body in cold water ; for many instances have occurred of persons having fallen overboard in a drunken fit, who have been picked up sober.

Therefore, it will be found an admirable mode of sobering those vagabonds, who, as a nuisance, infest the streets of every city, to take them to the nearest pump, and there deluge them with cold water. This will not only bring them to their senses, but send them off, under that sense of shame, which ever follows the commission of crime so truly ignominious.

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#### TO RECOVER PERSONS APPARENTLY DROWNED.

As soon as the body is taken out of the water, it should instantly be rubbed dry, and wrapt in warm blankets, unless the cooling process should be first necessary, in consequence of the patient being in a half frozen state. For, in that case, the body ought to be rubbed with snow, or flannels wrung out of cold water or vinegar, before any degree of artificial warmth be applied. After which, the patient is to be placed on a bed or matrass, with the head elevated, and air is then instantly to be blown into the lungs, by inserting the pipe of a pair of bellows into one nostril ; or, for want of that article, a tobacco pipe, a quill, or even a card folded in the form of a tube, while the mouth and opposite nostril are closed by an assistant, or covered with some wet paper. By thus forcing air into the lungs, and alternately expelling it by pressing the chest, respiration may happily be restored. Volatile salts, or vinegar, should also frequently be applied to the nostrils.

Next the intestines are to be stimulated by injections of warm spirits and water, or mulled wine. It will be more effectual still, if some warm spirits and water be introduced immediately into the stomach, by means of a syringe and a long flexible tube. While using the internal stimulants, a bladder of warm water should be applied to the region of the stomach, and the legs and

arms briskly rubbed with a warm hand, or with flannel, extending the friction gradually to the thighs, belly, and chest.

At this critical period, when sneezing, slight twitchings, or grasping, mark the first dawn of returning life, it will be prudent to moderate the stimulating powers. When respiration and the power of swallowing are restored, the patient should be kept moderately warm, and gentle perspiration encouraged by warm drinks.

Should feverish symptoms ensue, moderate bleeding, together with mild laxatives and cooling regimen, will complete the cure.

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#### TO RECOVER PERSONS

##### *Apparently killed by Lightning, or noxious Vapors.*

*Treatment.*—Instantly throw cold water, with some force, in large quantities, on the face and head, which should be often repeated for some time; and, if convenient, the whole body may be plunged into cold water, and afterwards wiped dry, and warmth gradually applied. If the body and extremities feel cool, instead of the application of cold water, the warm bath, about the temperature of the blood, should be prepared as soon as possible, and the patient immersed in it for twenty or thirty minutes, using frictions at the same time with the hand. As soon as the patient is taken out of the bath, his skin must be wiped dry, and wrapped up in warm flannel, and gentle stimulants employed to produce a reaction.

The vital principle is not unfrequently suspended by the deleterious fumes arising from fermenting liquors, from charcoal, coke, &c.; from combustion, from metals in a state of fusion, particularly arsenic and mercury; as, also, very often, from respiring the foul air of wells, privies, caverns, and mines. In such cases, the person should be freely exposed to pure and cool air, and supported, at the same time, in a leaning posture. Volatile salts, or other stimulating substances, are then to be applied to the nose, and cold water made use of, as above directed. When by these means the circulation



of the blood is increased, and the extremities become warm, bleeding will be proper, and must be often repeated, if the patient have fever, or complain of pain. Besides, which, evacuations must be procured by purgative medicines and clysters; and the antiphlogistic plan in every respect strictly pursued, until the febrile symptoms abate. After which, tonic medicines, with wine, in case of debility, are of infinite service.

In palaces where a lighted candle will not burn, animal life cannot be supported; and, therefore, in all cases, where wells, cist-pools, or deep vaults, are to be opened, a large candle, lighted, ought to be let down very slowly to the bottom, before any person attempts to descend.

If the candle be extinguished, means must be adopted to remove the noxious air, before any one descend. To effect this, the following modes will answer: 1st. Let the leathern pipe of an engine be introduced to the bottom of the well, if empty, or the surface of the water, and affix a blacksmith's bellows to the other end, when, by well working this, the foul air may be expelled. 2dly. Carbonic acid gas may be bailed out with a bucket made of coarse cloth like a bag, with a round piece of board, nearly the diameter of the well at the bottom; let the bucket, thus made, down upon the water, so that the bottom may rest upon it, and let the bag fall upon the bottom; then draw it up, when it will be filled with foul air, which may be brought up to the surface, and emptied by turning out and shaking the bag. 3dly. Let down about a bushel of quick-lime, dipping it into the water occasionally, to slack it; or, if there be no water in the well, throw down some for the purpose. 4thly. Pour down a large quantity of boiling water repeatedly into the well.

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#### BITES OF MUSKETOES.

Musketoë bites often degenerate into painful acrid ulcers, particularly on the legs, in consequence of scratching them. It is, therefore, proper, where these

insects are troublesome, to wear loose linen buskins to guard the legs in the evening; and when this has been neglected, apply oil, vinegar, lime juice, or camphorated spirits, to the part, to allay the itching and tingling occasioned by their bites.

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### BITES OF VENOMOUS ANIMALS.

*Treatment.*—The bites of venomous animals are cured by the same means, which are very simple, if the remedies were always at hand. The caustic volatile alkali, or *eau de luce*, is a certain antidote against the bites or stings of the most venomous serpents or spiders. Lint wetted with either of these should instantly be applied to the injured part, and renewed as it becomes dry. A teaspoonful of the same medicine must also be given to the patient in a little water, every hour, or oftener, as may be indicated by the symptoms.

Lunar caustic possesses the same admirable virtue, and should always be employed, when the other medicines are not at hand. The best mode of using it, is to dissolve five or six grains of the caustic in two or three ounces of water, and keep the affected parts moistened with it, as above directed. Some of the same ought also to be given internally, only in a more diluted state. When these remedies cannot be procured, a cataplasm, made of quick-lime and soap, should be applied to the bitten part, and as much Cayenne, or red pepper, mixed in spirits, swallowed every hour or two, as the stomach can possibly bear.

The juice of plantain and hoar-hound, in doses of a tablespoonful every hour or two, is considered a good remedy against the bites of venomous serpents, as is also squirrel ear. (*See Materia Medica.*)

As soon as the person is bitten by a poisonous animal, a tight ligature should be made above the injured part, until suitable remedies can be employed. When the toe or finger is bitten, cutting it off immediately will prevent mischief from the poison.

It is also a fact that sucking the wound, immediately after being bitten, will arrest the progress of the poison. This was lately verified in the neighborhood of Augusta, in the case of a youth who was bitten by a rattle-snake, and the wound being instantly sucked by a man present, prevented its mischievous effects; nor did any injury result to the operator.

When this remedy is resorted to, it may be prudent for the operator to guard his mouth with sweet oil or milk, and not swallow the saliva. It should never be attempted by a person with a sore mouth or very bad teeth.

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#### HYDORPHOBIA, OR THE BITE OF A MAD DOG.

This disease is so dreadfully alarming at all times, that we ought, as the best means of security, to endeavor to prevent it.

Therefore, as the infection of a rabid animal is conveyed by his teeth into the wound, the sooner it be removed, the less chance is there for absorption. Consequently, the bitten part should immediately be washed; and, where it can be cut out, this should be done deeper and more extensively than the wound itself. Then apply a cupping-glass, with previous scarification, and cauterize the wound with lunar caustic. If the wounded part cannot be excised from its situation, it must be well washed, and then scarified, and a free discharge of blood promoted by a cupping-glass. This being done, the bitten part is to be well cauterized with caustic, and a proper discharge kept up for a considerable time.

In addition to this treatment, we should diligently employ mercury, both internally and externally, to excite a salivation. Opium, in such doses as are given in tetany, has been said to produce beneficial effects.

A strong solution of arsenic, in water, has been recommended as an excellent wash for wounds inflicted by rabid animals; this having been found to possess the

power of destroying the poison, and thereby preventing hydrophobia from taking place.

It is probable, the caustic volatile alkali, might prove an antidote against either the poison of a rabid animal, or that of the most venomous serpent.

The scull-cap, thick-weed, and emetic weed, (*see Materia Medica*,) are considered valuable remedies in this dreadful disease. The most certain remedy, however, is to cut out the part; and this is certain at any period previously to the inflammation. If the wound be inflicted so deeply that the bitter part cannot be separated, a caustic must be applied to what remains.

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#### GUINEA WORM.

This disease is frequently among the *new negroes*, and is pretty uniform in its appearance.

The patient is at first sensible of an itching, and on examining the part, a small blister is generally to be perceived. Frequently, two or three of these blisters manifest themselves; and at times the part has the appearance of being stung with nettles. Beneath these blisters, or other affections, on raising the skin, there appears a small piece of mucus, on removing which, the head of a worm is to be seen. It is generally firmly fixed, and requires force to detach it from the parts beneath. When once separated with the forceps, it can be twisted round a ligature, or a piece of lint, and by this means, a portion of it, a foot or two in length, may be extracted in the course of one day.

In its appearance, it resembles what is called bobbin, or small tape, and is of the same size. It is transparent and moist, and appears to contain something like a white liquid. As much of it as will come away without pulling, is daily to be extracted. It is always dangerous to use force, on account of the risk of breaking the worm. When this accident happens, it occasions the most acute pain, accompanied with swelling and in-



inflammation of the neighboring parts; and these symptoms will often continue for two or three weeks. In this case, the worm also takes a different course, and soon throws itself into another part.

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### SWALLOWING OF PINS.

Pins, and other hard and sharp-pointed substances, sometimes pass into the gullet, and even into the stomach. It is too prevalent a practice, when any substance of this kind has passed into the stomach, to endeavor to hasten its passage through the bowels, by giving some opening medicine.

Milk alone, or mixed with raw eggs, should be immediately taken, as by the coagulation which takes place, the substance may become so involved, as to prevent its doing injury to the stomach; and on the same principle, should opening medicines, which render the fæces thin, be avoided; as by allowing the fæces to obtain some firmness, there will be the greater probability of the pointed parts of the substance being so sheathed as to prevent their injuring the intestines. It is but rare, however, that any serious injury is done to the stomach by the point of the pin.

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### CHILBLAINS.

*Symptoms.*—A number of inflammatory swellings, chiefly affecting the heels, feet, and toes, and sometimes the arms and hands, attended with a degree of pain and excessive itching.

*Causes.*—This disease is owing to a weaker action of the small vessels most remote from the heart, occasioned by cold or dampness; and occurs most frequently among children, and people of delicate constitutions.

*Treatment.*—Where the parts are frost bitten by long exposure to the cold, they should be plunged into the coldest water, and afterwards rubbed with salt.—When they are only benumbed, they may be rubbed with strong brine, or spirits of camphor, or opodeldoc, (*see Dispensatory*,) to which a little laudanum may be added, if the pain or itching be very troublesome ; but when they crack and discharge an acrid matter, poultices should be applied, but not for any length of time, as their continuance is apt to produce fungous excrescences. The application of diachylon plaster to the part, if the exciting cause be avoided, will afterwards effect a cure.

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#### SCALDS AND BURNS.

The leading indication in affections of this kind, is to abate the pain ; and this is effected by whatever induces insensibility of the part, as plunging it suddenly into cold water, covering it with ice or snow, or applying soft soap, brandy, laudanum, ether, or spirits of turpentine. Of these remedies, spirits of turpentine deserves the preference, especially where the skin is detached. A liniment prepared of basilicon ointment and spirits of turpentine, and applied twice a day to burns, when there is a loss of substance, alleviates the pain like a charm, and brings the sore to suppuration in a few days, which may afterwards be healed by a liniment composed of equal parts of linseed oil and lime water, or by the application of the simple saturine ointment, or Turner's cerate, (*see Dispensatory*,) or, what is preferable, an ointment made with thorn apple. (*See Materia Medica*.)

The application of cotton to a burn or scald, admirably alleviates the pain. My honorable and highly esteemed friend, Dr. James Jones, of Virginia, stated to me the case of a child which fell into a tub of scalding water, being most wonderfully relieved of pain, imme-

diately on covering it with carded cotton. After a few days, he directed the sores to be dressed with the thorn apple ointment, which soon completed the cure.

Blisters, which occur from burns, should be opened as soon as the irritation induced has subsided; and in order to prevent any bad effects from the admission of air, small punctures ought to be made, in preference to incisions.

When fevers attend burns, mild laxatives become necessary; and where the pain is violent, laudanum ought to be given in pretty large doses. Should the sores not heal kindly, astringent washes are necessary, as recommended for indolent ulcers.

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## HERNIA, OR RUPTURES.

The term rupture was adopted when it was supposed that the disease was almost in consequence of a rupture of some of the parts, which form the cavity of the abdomen or belly. But anatomical examination has shown, that this disease, as it most commonly appears, takes place in consequence of the protrusion of some of the contents of the abdomen through openings, which are natural to the human body, and without any violent separation of the parts. It will not be necessary to describe, particularly, the several kinds of ruptures which may occur. It will be sufficient to observe, that ruptures will generally appear in the groin, in the upper and fore part of the thigh, and at the navel. Those which appear, at first just above the groin, will, in general, if neglected, soon descend into the scrotum, in men, and into the labia pudendi, of women. The tumor, in this disease, is most commonly formed by a part of the intestinal canal, or of the omentum or caul, or of both.

In those ruptures which are capable of easy reduction, as soon as a pressure is properly made, the protruded intestine generally slips up, all at once, with a kind

of gurgling noise, and the tumor immediately subsides; where the tumor has chiefly been formed by the omentum, it passes up more slowly, and without that particular noise which accompanies the return of the intestine.

In these cases of rupture, where stricture has taken place on the protruded parts, and the reduction is thereby rendered difficult, the belly becomes tense and painful, the pain of the belly, as well as of the tumor itself, being much increased on the least exertion, a total stoppage of discharge by stool takes place, and the patient is distressed by a sickness at the stomach, which increases until there is almost constant retching and vomiting.

To prevent these evils, it is only necessary that such a pressure be kept on the opening through which the part protruded, as may prevent its again falling out. The pressure of the fingers show how difficult this may be done; and if, at the time this pressure is made, the patient but gently coughs, he will discover how forcibly the protruding parts are driven outwards, and how necessary it is to guard against their future propulsion. The ingenuity of artists has devised a mode, by spring trusses, of applying a constant and properly adapted pressure, requiring little or no exertion, or even attention, of the patient himself. No person, therefore, in the situation just described, should suffer a day to pass, more than is absolutely unavoidable, without obtaining the comfort and security which will follow the application of a truss, since, if it be adopted at the first appearance of the disease, not only will the malady be stopped in its progress, but, if employed with constancy and steadiness, a radical cure may be gained.

If it be discovered that the return of the rupture is become difficult, and that a structure on the protruded part has perhaps taken place, the person should place himself on his back, inclining to the side opposite to that diseased, with the head low, and the breech raised high, the knees being drawn upwards, and a little outwards. Whilst lying in this posture, he should endeavor, by such pressure as he has been accustomed to employ for its reduction, to return the protruded part. Should he



not succeed in this attempt, he may lay on the part a piece of folded linen, dipped in cold water, and repeat his attempts. If these be also unsuccessful, he may then be assured that a stricture has taken place, and as his life depends on its speedy removal, no time should be lost in obtaining the best surgical assistance that can be had.

The *umbilical hernia*, or the rupture of the navel, is most common in childhood, and is easily cured, if early attended to.

The means to be adopted are simply these:—the protruded parts are to be returned, which may be easily done, by slight pressure with the finger, and retained in their proper situation, by a conical piece of very soft sponge, thoroughly cleared, by rubbing between the thumb and finger, of sand and minute shells, which may be lodged in its cavities. This being kept to the part, by the point of one finger, is to be secured by several slips of strongly adhesive plaster, three inches in length, crossing each other in a stellated form.

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## PROLAPSUS ANI,

### *Or Falling of the Fundament.*

It is occasioned by weakness of the part, which is aggravated by costiveness, hemorrhoidal swellings, diarrhoeas, and particularly a tenesmus.

*Treatment.*—The cure is to be effected by reduction of the part as soon as possible, and retaining it in its natural position, by a compress, secured with a bandage. To effect its reduction, the patient should be laid on his face in bed, with his buttocks raised above the rest of his body, and while supporting the tumor with the palm of one hand, the gut least protruded, is to be first introduced with the fore finger of the other. As soon as the bowels are returned, the bandage is to be applied.

When the protruded parts become inflamed, from being exposed to the air, before a reduction be attempted, the inflammation is to be alleviated by blood-letting, and fomenting the part with a warm decoction of mullein.

Persons who are subject to falling of the fundament, would do well to wash the part, immediately after evacuation, with a strong decoction of oak bark.

Such remedies as tend to recover the tone of the parts most readily, are to be used, as cold bathing partially applied, and injections of the decoction of bark, with the addition of a little laudanum, or starch, if there be an acrid discharge. With the same view, tonic medicines, as steel, Columbo, or bark, should be taken thrice a day. Persons subject to this disease, ought to use such diet as produces but little excrements, and those of a soft consistency. Rye mush and molasses, used exclusively as a diet for a few weeks, has been found to produce a perfect cure.

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### TUMORS, OR BILES.

Every tumor terminates in one of the following ways: By an absorption of the substance into the circulation, by a conversion into *pus*, or degeneration into scirrhus or cancer.

There are two plans for the treatment of tumors. Either by resolution or maturation. In the first, there is a dispersion of the swelling; and in the second, it is brought to maturity, and of course, a discharge takes place by spontaneous rupture, or by incision.

*Treatment.*—In the treatment of tumors, we must be regulated by the nature and condition of them.

If, for example, they should appear on any part of the body, with only a slight degree of pain, tension, and inflammation, and no preceding indisposition, that may induce us to believe it to be the effort of nature to get rid of some noxious matter, we should then endeavor to disperse the inflammation, by strictly observing a cool-

ing regimen, by bleeding, by mild cathartics, and by topical remedies, as cloths wrung out of lead-water, or saturine poultices, (*see Dispensatory*,) often renewed.

But when they arise from bad habits of body, their suppuration in all cases should be promoted as soon as possible, by warm emollient poultices, as milk and bread, flax-seed, or mush and fat, renewed every three or four hours.

When the suppuration is complete, if the matter does not make its own way, the tumor is to be opened with a lancet or caustic, and after applying one or two poultices, it should be dressed with basilicon, (*see Dispensatory*,) spread very thin on lint, night and morning, until it ceases to discharge, after which, with Turner's cerate, or some healing ointment. If fungous or proud flesh appear, it must be destroyed by sprinkling red precipitate, burnt alum, or rhubarb over it, or touch the protuberant part with blue vitriol or caustic.

Attention must also be paid to the general state of the system, since, if that particular state on which the tumors depend be not changed, the patient may be harassed a considerable time by their recurrence.

Hence, in debilitated constitutions, the tonic and strengthening remedies, such as bark, sea bathing, &c., should be employed, and in robust and gross habits, sulphur, and cream of tartar, ought to be taken in doses of a teaspoonful thrice a day.

A tumor on the gums is to be brought to suppuration, by applying roasted figs internally to the part, as warm as can be borne; and afterwards, the mouth is to be frequently washed, either with the astringent or detergent gargle. (*See Dispensatory*.) But when it arises from a carious tooth, a removal of it becomes necessary, in order to effect a cure.

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### COMMON ULCERS.

No disease occurs more frequently among the poor and negroes, than ulcers of the legs; for this obvious

reason, they are more exposed to accidents, and when they meet with a wound or contusion in the leg, the injured part inflames, and becomes an ulcer for want of proper care. Women with obstructed menses are also subject to this disorder.

Ulcers receive various appellations, and require different modes of treatment, according to their appearances, or the causes and peculiarities of the constitution of the patient. Where the disease is local, topical remedies only are necessary; but when it is connected with any disorder of the constitution, medicines that affect the whole system, are absolutely necessary. When ulcers appear to have had any effect, either in carrying off or preventing disorders to which the constitution may have been liable, a cure should not be attempted, until an issue be made in some more convenient part, which should be made to discharge nearly as much as the ulcer. (*See Issues.*)

An ulcer not attended by any considerable degree of pain and inflammation, and which affords a discharge of mild matter, of whitish consistence, the granulation firm, red, and of healthy appearance, is called the simple purulent ulcer, and is entirely a topical affection. This ulcer is the most simple that can occur, both in its symptoms and method of cure; and it is to the state of such a sore that every other species must be reduced before a permanent cure can be effected.

The causes of purulent ulcers are, all wounds that do not unite without the formation of matter, and every external accident that terminates in suppuration, with an opening as a consequence of it.

In the cure of this species of ulcers, first remove any inflammation which may attend it, by emollient poultices, as bread and milk, renewed every three hours. As soon as the inflammation subsides, omit the poultices, lest the granulations be rendered lax and flabby, but keep the sore clean, and dress with some mild ointment, such as Turner's, or the simple cerate, (*see Dispensatory*), spread very thin on soft lint, or apply dry lint, and upon that, a piece of linen spread with the ointment. The thorn apple ointment, (*see Materia Medica*), is a



most valuable application to heal sores. The frequency of dressing ulcers must depend on the quantity of matter discharged; but in general, they should be dressed once in twenty-four hours in winter, and twice in summer, and the greatest care should be taken, in renewing the dressings, not to expose the sore for any time to the air. When the ulcer is filled up with sound flesh, the remaining part of the cure consists in the formation of a cicatrix. This is frequently the work of nature, but, in many cases, where every deficiency appears to be supplied, still a cure is tedious, the surface of the sores remaining raw, and discharging freely. In such cases, the sores should be washed twice a day, with simple lime water, or with some of the astringent washes. (*See Dispensatory.*)

Ulcers of the irritable kind, which yield a thin ichorous discharge, sometimes bloody, and give pain on being touched, are brought to a favorable state by warm fomentations, as decoctions of marsh-mallows, slippery elm, wormwood, camomile flowers, or hops, (*see Materia Medica*), and by poultices of the same ingredients, to which may be added bruised flax-seed or oatmeal. But as soon as the irritability of the ulcer is removed, these applications should be discontinued, and the common remedies for ulcers employed.

However, there are cases of irritable ulcers being rendered more painful by the application of any thing warm, and when this happens, such fomentations are not to be employed. There the sweet oil or saturine poultices applied cold, will be found most beneficial.

Indolent ulcers, which are marked by a backwardness in forming granulations, and in those that are formed, a want of sufficient strength to bring about a complete cure, requires stimulating applications, as lime-water, solution of kali, blue vitriol, or any of the astringent washes. Lint dipped in either of these solutions, that may be found to agree best with the patient, should be applied twice in twenty-four hours to the sore, after being carefully cleansed with Castile soap and water. The strength of the solution should be gradually in-

creased every two or three days; for what at first gives considerable pain, will soon lose that effect. Tincture of myrrh, pure or diluted, according to the state of the ulcer, is, in many instances, a good application, and a decoction of walnut leaves, is exceedingly useful in disposing foul ulcers to heal.

In some superficial ulcers, attended with a thickening of the skin, and when there is an unusual coldness of the limbs, without any tendency to mortification, warm salt water has been used with the greatest advantage.

There is nothing of more importance, both in facilitating and ensuring a permanent cure of ulcers on the legs, than compression, which, however, should never be employed until the inflammation has subsided. As soon as this desirable event has taken place, and the usual dressings are applied, the affected part should be covered with several foldings of soft linen rags, and the whole secured upon the part with a calico or flannel bandage, three inches in breadth, and four or five yards in length; or rather, as much as will support the limb from the foot to the knee.

This bandage should be applied with as much firmness as can be borne by the patient, and as much evenness as possible, by passing it first round the leg at the ankle joint, then once or twice round the foot, and afterwards up the limb in a spiral manner, until it reaches the knee, observing that each turn of the bandage has its lower edge about an inch above the lower edge of the fold next below. If the compression should give pain and produce inflammation, the part that is affected should be moistened with cold water, poured from a tea-kettle or tea-pot, and repeated as often as the above symptoms may indicate the necessity.

Should any disease prevail, its removal must first be effected. If the patient be weak, the diet should be nutritious, and tonic medicines, as bark, or the nitric acid, given in their usual doses. But if, on the contrary, of a plethoric habit, he should observe a spare and cooling regimen, and take a teaspoonful of cream of tartar and flour of sulphur thrice a day. In obstinate cases, small

doses of calomel, until the system becomes affected with it, or the use of the pokeberry bounce, will assist the cure.

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## WOUNDS.

The cure of all wounds is effected two ways, either by adhesion or suppuration; and previously to attempting either of these modes, the hemorrhage or farther effusion of blood should be restrained, and any extraneous substance removed.

Hemorrhages are to be restrained by the application of dossils of lint, or by the tourniquet, or pressure with the hand above the wounded part, until a ligature can be applied.

In dangerous hemorrhage, or bleeding in the extremities, we have known the curative operations wonderfully assisted by simply raising the limb as perpendicularly as possible. In the erect posture, the gravity of the blood so checks its velocity, as to enable the surgeon, with great care, to stop its effusion, which he had not been able to effect while the limb was pendent, and its vessel distended with blood.

Simple as the suggestion may appear, it is a new discovery in the science of healing, for which we are indebted to Professor Physic, whose extraordinary skill in that noble art, has conciliated to him that very amiable title, "the American Hunter," and, for safety of all surgical operations, has placed Philadelphia on the same high level as Edinburgh itself.

When ligatures are necessary, in consequence of large arteries being wounded, the following rules are to be observed in applying them: If you have no tourniquet, take a garter or a cord, make a small linen cushion, about four or five inches long, three broad, and about two thick, or roll up a handkerchief hard, in a similar form, and lay it on the trunk of the artery, above the wounded part; put the garter or chord over

the handkerchief, round the limb; tie a knot, leaving a proper space; and then twist the ligature with a piece of stick, until the hemorrhage be completely restrained; you are then to prepare a ligature, formed of two or three white waxed threads, proportioned to the size of the vessel; after which, slacken the bandage, in order, by its hemorrhage, to discover exactly the situation of the artery, and with a *tenaculum* or a crooked needle, stick its point into the coat of the artery, and draw out the latter for the eighth of an inch, when a ligature, previously placed over the instrument in the manner of a ring, by one of the ends being put twice through the other, termed the surgeon's knot, is to be pulled over the point of the needle by an assistant; and when upon the vessel, its two ends should be drawn gently, until the sides of the latter be compressed. A second knot, if the artery be large, may be then made; after which, the instrument is to be removed, and the ends of the thread or ligature cut off, at such a distance, that they may hang at least one or two inches without the edge of the wound.

When a small artery is wounded, if it be divided, it retracts, and the hemorrhage presently ceases. If it be punctured, the wound should be enlarged, and then the artery may be tried, if proper pressure prove ineffectual. Sand, dust, or small pieces of glass, &c., are best removed by washing the part in warm water, either by means of a sponge, or of a syringe.

In the third place, as the principal object, proceed to the employment of those means, which will probably heal the wound in the most easy and expeditious manner; for the longer this be neglected, the less is the part disposed to heal. Whenever the nature of the injury will admit of it, the divided parts should be immediately brought into contact, the irritation excited by the wound itself, will then generally be productive of a certain degree of inflammation, which will accomplish a union in the course of a few days; however, in relaxed habits, with symptoms of debility, the application of some stimulants, as Turlington's balsam, spirits, or balsam of apple, will be required to produce that effect.



The wound is then said to be healed by the first intention, and this mode of cure should always, when practicable, be attempted. The means of drawing, and preserving divided parts in contact, are bandages, adhesive plasters, and sutures. With respect to the two first, these should be preferred to the latter, in wounds that do not penetrate to any considerable depth.

The mode of applying adhesive plasters is by straps; one half of which is fastened on one side of the wound, and the other on the skin on the other side of the wound, drawing it tight, and holding it firmly, until the warmth of the part secured it; but if the wound be deep, this contact of the sides must be made by sutures.

In forming sutures, it should be observed, that one stitch, suture, is sufficient for every inch of wound, and that the ligature or stitch should always be carried near the bottom of the wound, and the threads passed from within, outwards. Thus, a needle being put upon each end of the same thread, well waxed, and each of the needles inserted at the bottom of the sore, when pushed outwardly, about half an inch to an inch from the end of the wound, according to its depth, will form one stitch, and the needle being withdrawn, the same thing must be repeated, according to the extent of the wound. When all the stitches are completed, the lips of the wound are to be pressed together, and supported in that position, until the ligatures are tied in the manner as already directed for making a surgeon's knot.

It is of consequence to observe, that where the sutures or adhesive plasters have been neglected at first, they may be employed with advantage during any stage of the sore, as the parts will unite at any time very readily; and it will expedite the cure very much, to bring the edges of the ulcer into contact, whenever it can be done. When the parts are brought together, in the manner directed, in order to prevent the access of air, it will be proper to cover them with lint, spread either with a thick mucilage of some mild gum, or some bland ointment; as the simple saturine, or thorn apple ointment. In debilitated or relaxed habits, apply Turlington's balsam. (*See Dispensatory.*)

The first dressing of wounds should never be removed, until the cure be completed, or until they appear covered with matter, unless the pain in the wound become severe, and be productive of much inflammation; and then the dressings should immediately be removed, and the parts gently rubbed with some olive oil, and a plaster of saturine cerate, spread on soft lint, applied. If this prove insufficient, and the inflammation be observed to rise still higher, a separation of the lips, the stitches tense, and the points where stitches pass, particularly inflamed, cut the ligatures, and take away every thing that is like stricture upon the wound. All hopes of procuring adhesion must now be abandoned, and the wound should be brought to a speedy and plentiful suppuration, by flax-seed, or milk and bread poultices, often renewed; and as soon as there is a full appearance of pus, with relief of the more violent symptoms of inflammation, the poultices should be laid aside, and the sore then treated as a simple ulcer.

When the sutures or plasters have been applied, and the symptoms of pain and inflammation continue moderate, they may generally be removed about the fifth or sixth day, as a union will by that time be produced.

Gun-shot, or lacerated and contused wounds, as marked by their ragged and unequal edges, are the most dangerous of all others, from their disposition to gangrene. Hence, it is obvious, that in these wounds, the means to guard against mortification should be early employed. In the treatment of wounds of this description, three stages are to be observed in its progress, which may be termed the inflammatory, suppurant, and the incarnating. In the management of the first or inflammatory stage, especially if the patient complain of much pain, blood-letting should be had recourse to, and repeated according to the inflammation and strength of the patient; and, if possible to procure leeches, these should be applied near the edges of the sore. Emollients are then to be used, as pledgets of mild ointments on the wound, with poultices of bread and milk, or flax-seed laid above, and renewed every three or four hours, in order to promote a speedy suppuration, which are

the best means of preventing gangrene. When the pus is freely formed, a separation of the most injured parts takes place, and as soon as they have come away, the edges of the wound may be brought together by plasters or bandages, but no kind of suture should be employed; and the sore will then come to be treated as a simple ulcer.

In the second or suppurant stage, the chief point is to check the excess of suppuration, and dispose the wound to heal. This depends on a light nourishing diet, with wine, and the plentiful exhibition of bark and elixir vitriol.

The third or incarnating stage is promoted, by placing the member in a proper position, to give free discharge of matter, assisted by pressure at the same time, and by opening every collection which appears, by removing splinters, bones, or whatever causes irritation; and by healing with astringent dressing of lint, dipped in the solution of alkali, lime-water, or any of the astringent washes, (*see Dispensatory*.) when the discharge is excessive.

In the progress of wounds, certain constitutional symptoms arise, that demand particular attention: these are pain, inflammation, and convulsive affections. The first of these usually goes off in a short time, by attending to the posture and ease of the wounded part, and moving any extraneous irritation; but when it continues very violent, and for a longer time than usual, it will be necessary, in the first place, to try the effects of laudanum, in doses of eight or ten drops every two or four hours; and when the inflammation is violent, to unload the vessels by topical bleedings; which may be farther aided by fomentations and emollient poultices. If these be insufficient, and the pain still continue acute, it probably depends on a partial separation of nerves; to relieve which, a complete division of them should be made. The latter complaints are spasmodic, which vary in degree from the slightest convulsive twitching, to the highest state of the spasm in the attack of the lock jaw. They are frequently the effects of trifling injuries; a small scratch, for instance, which does not



penetrate to a greater depth than the skin, will sometimes induce them; and, when they happen as the consequence of large wounds, they do not make their appearance until the sore seems nearly healed.

Upon the first symptoms of these affections, the patient should be immersed in a bath of warm water, soap-suds, or a lie made with wood ashes, as long as he can bear it, and opium should be exhibited in pretty large doses, every two or three hours, as the symptoms may indicate. When this fails, the malady is to be treated by remedies prescribed for tetany.

The constitutional treatment of wounds requires, during the inflammatory stage, the strictest attention to the cooling regimen, a low spare diet, the occasional use of laxatives, and the wounded part kept in such a situation as affords most relief. When suppuration is formed, a fuller diet will then be necessary; and if the discharge of matter be excessive, bark and elixir vitriol must be employed.

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### MORTIFICATION.

The word mortification, in its present acceptation or meaning, is generally supposed to have place where the circulation is no longer performed through the diseased part, which generally turns black, and becomes putrid, producing a separation of the diseased surface from the sound flesh, like an *eschar*, in consequence of a caustic having been applied. In the incipient stage of this disease, which is termed gangrene, there is generally a very high degree of inflammation, and a swelling of the parts affected, with some vesications, like those from scalds, but of different colors, according to the extravasated fluid, with which they are replete; sometimes pellucid or yellow, at other times black or brownish.

While things are in this state, attempts should be made to prevent a sudden change to a mortification;



but, in order to effect this, it must be observed, that a tendency to mortify may be owing to very opposite causes. It must, therefore, be extremely obvious to every man of consideration, that there cannot be any thing properly a specific for a disease, where a plethora or fulness is the cause in one subject, and inattention in another.

We know very well that all inflammations may terminate in mortifications. It is also of importance to know, that where there is a languid circulation, as in old age, or in cases of excessive debility, from protracted fevers, the extremities not only threaten soon to become gangrenous, but the progress to mortification is often very rapid under such circumstances; for not only the vital heat is deficient, but the vessels themselves are frequently diseased; and, though duly distended with blood, are incapable of reacting on the contained fluid, which, consequently, in time, must stagnate in the small vessels.

Hence, it is obvious, that a mortification may proceed from a circulation that is too rapid, or too languid; and, consequently, the treatment must vary according to circumstances, and the cause of disease.

In the first case, general blood-letting, diluent drinks, with nitre dissolved in them, and the cooling regimen in every respect, are indispensable for its cure. And in the second, a liberal use of cordials and invigorating medicines, as wine and bark, to raise and maintain the vital heat, and to check the progress of putrefaction, can alone be depended upon.

When the mortification proceeds from too languid a circulation, or when there is much pain, opium or laudanum is one of the greatest cordials, and should be taken freely every three or four hours, but not in such doses as to produce a narcotic effect.

The best external application to arrest the course of gangrene or mortification, is to apply a blister over the gangrenous part, sufficiently large to cover one or two inches of the sound flesh, and afterwards to dress the part with cataplasms, made of bark, charcoal powder,

and yeast to be renewed every three or four hours, or as often as they acquire a putrid smell.

When the mortified parts begin to separate, remove no more at each dressing than comes away without pain or loss of blood; and as soon as the gangrene stops, and granulations of good flesh appear, it is to be treated as a simple ulcer.

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### SPRAINS AND BRUISES.

In the treatment of sprains and bruises, the chief point is to give an instantaneous vigor to the solids, so as to prevent the increase of effusion. Hence, the part should be instantly plunged into cold water. After this, cloths wetted with vinegar or lead-water, to which, laudanum may be added, should be applied, and renewed as fast as they grow warm, until the pain and inflammation have somewhat subsided. The sprained part may then be dressed two or three times a day, with a bandage of brown paper, dipped in warm vinegar and spirits, or embrocated with opodeldoc or volatile liniment, (*see Dispensatory*,) always observing to preserve the part in the easiest and most relaxed posture.

In addition to this local treatment, if the patient be of a plethoric habit, or the injury very severe, blood-letting, cooling cathartics, and a light diet, are particularly enjoined. When bruises have been neglected at the onset, or become painful, warm fomentations of bitter herbs are extremely useful; and their good effects will be considerably aided by applying the ingredients themselves as a poultice to the part, as warm as can be borne, and sprinkled with a little finely powdered camphor.

After serious sprains, the patient often complains of weakness and uneasiness in the injured parts. In such cases, a stream of cold water poured on the part at a considerable height, from the spout of a tea-kettle or

pitcher, two or three times a day, completes the cure, especially if a flesh brush or flannel be vigorously used immediately before and after the application. Some assistance will likewise be obtained by the use of a bandage or roller, to confine the swelling when that symptom occurs.

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## DISLOCATIONS.

Dislocations is the removal, by force, of an articulated bone from its natural situation, which is easily known by a degree of protuberance on one side, equalled by a corresponding hollow on the other; by comparing the joint of one member injured with its fellow; by an inability to move the injured limb; and by pain and tension in the part affected. In whatever part a dislocation happens, it is of great importance to have it reduced as soon as possible, because, by delay, the operation becomes extremely difficult, and is very frequently rendered impracticable, after the inflammation and swelling have come on.

Therefore, whenever this accident happens in the country, if medical assistance cannot immediately be obtained, the most intelligent person present should reduce the bone.

In the replacing of dislocated limbs, the principal object to be attended to, is the mode in which the extension is made; for the success of the operation depends more on this, than the force with which it may be applied. Therefore, gradually extending from one side to the other, and gently moving it upwards and downwards, is more likely to succeed, than strong extension in a right line: the force should be begun very gradually, and increase slowly at each trial, in case it resists the first. In case of a luxation being obstinate to reduce, bleeding, so as to cause faintness, may often be used advantageously, and whilst the patient is in a weak state, there is a greater probability of success, from extension well directed; the operator, at the same

time, endeavoring, with his hands, to replace the dislocated end of the bone.

After the bone is replaced, compresses made by two or three folds of old linen, wetted with vinegar or lead-water, should be constantly applied to the part, in order to obviate inflammation; and the limb should be retained in its natural situation, by bandages, which should neither be applied over-tight nor over-loose; as in one case, they would compress too much, and in the other, they would be of no use to the parts.

Where inflammation has taken place before the reduction is accomplished, it cannot be performed until that be overcome. For this purpose, we must adopt the anti-phlogistic plan, such as bleeding, keeping the bowels in a laxative state, by the occasional use of the cathartic mixture, and using warm drinks, together with the camphorated powders, and the antimonial solution, (*see Dispensatory*,) in their usual doses, in order to promote perspiration.

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#### DISLOCATION OF THE JAW.

The lower jaw may be luxated by yawning, blows, falls, chewing hard substances, or the like. This accident may be known to have taken place from the patient's being unable to shut his mouth, or eat any thing. The chin, likewise, either hangs down, or is wrested to one side; and the patient is neither able to speak distinctly, nor to swallow without considerable difficulty.

The common method of reducing a dislocated jaw is to place the patient upon a low stool, in such a manner that an assistant may hold the head firmly, by pressing it against his breast. The operator is then to push his two thumbs, (protected with linen cloths, that they may not be bitten when the jaw slips into its place,) as far back into the patient's mouth as he can, and then, with his fingers applied to the outside of the angle of the jaw, endeavor to bring it forward, till it move a little



from its situation. He should then press it forcibly downwards, and backwards; by which means the elapsd heads of the jaw will immediately slip into their place.

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### DISLOCATION OF THE SHOULDER.

The humerus or upper bone of the arm is the most subject to dislocation of any in the body, and may be luxated in various directions. The accident, however, happens most frequently downwards, and very seldom directly upwards. This dislocation may be discovered by the patient's inability to raise his arm, as well as by violent pain in attempting it, and by a depression or cavity on the top of the shoulder. When the dislocation is downward or forward, the arm is lengthened, and a ball or lump is perceived under the arm-pit; but when it is backward, there appears a protuberance behind the shoulders, and the arm is thrown forward towards the breast.

The usual mode of reducing a dislocation of shoulder is to set the patient upon a low stool, and to cause an assistant to hold his body firmly, while another lays hold of his arm a little above the elbow, and gradually extends it. The operator then puts a napkin under the patient's arm, and causes it to be tied behind his own neck. By this, while a sufficient extension is made, he lifts up the head of the bone, and with his hands directs it into its proper place. In young and delicate persons, an operator may generally reduce this dislocation by extending the arm with one hand and thrusting in the head of the bone with the other. In making the extension, the elbow ought always to be a little bent.

If much difficulty occur in the operation, blood-letting, sometimes so far as to produce fainting, becomes necessary. This remedy seldom fails to facilitate the reduction.

## DISLOCATION OF THE ELBOW.

The bones of the fore-arm may be dislocated in any direction, but most commonly upwards and backwards. In this luxation, a protuberance may be observed on that side of the arm towards which the bone is pushed : from which circumstance, joined to the patient's inability to bend his arm, a luxation at the elbow may be known.

For reducing a dislocation at the elbow, two assistants are, for the most part, necessary : one of them must lay hold of the arm above, and the other below the joint, and make a pretty strong extension, while the operator returns the bones in their proper places. The arm must afterwards be bent, and suspended for some time with a sling about the neck.

Dislocations of the wrist and fingers are to be reduced in the same manner as those of the elbow ; namely, by making an extension in different directions and thrusting the head of the bone into its place.

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## DISLOCATION OF THE THIGH.

When the thigh-bone is dislocated forward and downward, the knee and foot are turned out, and the limb is longer than the other ; but when it is displaced backward, it is usually pushed upward at the same time, by which means the limb is shortened, and the foot is turned inward.

When the thigh-bone is displaced forward and downward, the patient, in order to its reduction, must be laid upon his back, and made fast by bandages, or held by assistants, while by others an extension is made by means of slings, fixed upon the bottom of the thigh, a little above the knee, while the extension is made, the operator must push the head of the bone outward until

it gets into the socket. If the dislocation be outward, the patient must be laid on his face, and during the extension, the head of the bone must be pushed inward.

Dislocations of the knees, ankles, and toes, are reduced much in the same manner as those of the upper extremities; namely, by making an extension in opposite directions, while the operator replaces the bones. In many cases, however, the extension alone is sufficient, and the bone will slip into its place merely by pulling the limb with sufficient force. It is not hereby meant that force alone is sufficient for the reduction of dislocations. Skill and dexterity will often succeed better than force; and one man who possesses them has been able to perform what the united force of many was found inadequate to accomplish.

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## INJURIES OF THE HEAD,

### *And the Fractures of the Limbs.*

If, in consequence of a bad fall, or blow, a considerable injury appears to have been received, the sufferer being unable, in consequence of the loss of his senses, to point out the injured part, some consideration is necessary, before any attempts are made even to raise him from the ground. Because, should a fracture of one of the bones have happened, and not suspected by his assistants, their exertions to raise him, and to place him on his feet, might force the ends of the fractured bone through the soft part, and convert a simple fracture into a very dangerous compound one. The limbs therefore, should be carefully examined; but even if they seem to have sustained no material injury, yet should the patient not be precipitately raised, until something be provided, on which he may be placed; as, thereby, unnecessary and perhaps injurious exertions are avoided.

As it will be fair to conclude, from the deprivation of the senses, that the brain may have sustained some inju-

ry, great care should be taken to convey the patient to his apartment, with as little injury as possible; and, whilst lying in bed, the head should be somewhat raised. If the patient be of a plethoric habit, a moderate bleeding will be required as soon as possible after the accident; after which, the bowels should be evacuated either by purgative medicines or clysters. One or two stools being procured, and if possible the warm bath used, the anodyne sudorific drops, (*see Dispensatory*,) should next be exhibited to produce perspiration, and to excite absorption of the extravasated blood; and this mixture should be continued, in doses of ten or twelve drops, every four or six hours, until the patient is out of danger, observing to keep the bowels open.

During convalescence, the bark, Columbo, or steel, with wine may be employed. If there be a laceration of the scalp, every attempt should be made to induce suppuration of the part, by the application of warm fomentations or poultices, and this taking place, a relief of all the symptoms will occur, when it is to be treated as a simple wound.

But should it be discovered, that a *leg* or *thigh* is broken, the patient is not to be stirred until a proper vehicle, as a door, or two or three boards well secured together, is procured, on which he can be placed. To place him on this, two persons may raise him by means of a sheet slid under his hips, whilst one raises him by the shoulders, one person raising the sound leg, and one carefully conducting the fractured limb, which should be placed on a pillow, with the knee a little bent. The best mode of conveyance is undoubtedly by two or four men, and a carriage should never be employed, when this mode can be adopted. As the patient will be under the necessity of lying some time without getting up, much subsequent pain and exertion will be prevented by preparing the bed in the following manner:—

In place of the laced canvass, bottom boards are to be laid across the bed frame, which makes the bed hard, and keeps it perfectly level and smooth during the cure. In place of a feather bed, a mattress only is to be laid above those boards; over this another, cut into four



parts, with a piece of a sheet sewed round each portion, is to be placed, that they may be shifted under the patient from time to time. On the bed, thus prepared, a pillow, like a mattress, flat and firm, is to be laid for receiving the limb.

In setting a broken bone, very little extension is required, nor should tight and firm bandages be used, which give considerable pain to the patient without the least benefit. In a simple fracture of the thigh or leg, with patients not unruly, very little more is necessary than to restore the foot to a right direction with regard to the leg, and then stretch out the limb on a well made pillow, observing to extend, straighten, and lay it anew, when it is disordered or shortened, without fear of hurting the callus. And when you have placed the limb between two splints, or troughs, made of untanned leather or pasteboard, which have been previously soaked and softened, the whole braced down with ribands or tapes, to preserve it steady, you have done every thing.

Having prepared two long troughs, or pieces of untanned leather or pasteboard bent in a hollow form, lined, or rather cushioned with two or three folds of flannel, with tapes or ribands four or five in number, attached to the outside of one of the splints, by which both splints may, after all is over, be gently tied together with bow knots, to be slackened or tightened, according to the swelling of the limb; you are then to place these by the side of the fractured leg, and direct one of the assistants to apply his hands broad around the upper part of the limb, and grasp it gently and steadily; take the foot and ankle in the same manner in your own hand; slip your left hand under the broken part of the limb, slide it gently along, and then lay it upon the splints, to which the ribands are attached.

If the bone cannot be reduced by this extension, endeavor to force it in with your thumbs. Begin then to lay the limb smooth; let your assistant again grasp it, by spreading his hands upon the thigh, or below the knee, with the design of extending, along with you, not by lifting the leg from the pillow, but rather by keeping it down, and steadying it by pressure, while you, with both

hands, lift the foot and ankle, grasp them gently, but firmly; raise them a little from the pillow, and draw gently, steadily, and smoothly. When you have thus extended and smoothed the broken leg, in a manner which you almost suppose agreeable, rather than painful, to the patient, press it down gently, and steadily upon the lower splint; the upper is then to be laid above it; and by grasping the soft and moistened splints, you must model them a little to the shape of the limbs. When the whole has taken a form, tie several tapes, one after another; and after having tied them in a general way, go over them again, one by one, and tie them a little closer, so as to keep the limb agreeably firm.

The process is either slower or more imperfect in children and old people: their bones, therefore, are more apt to be broken again; hence with them, the splints should be kept longer applied. On particular occasions, also, particular precautions must be taken. Thus, with delirious patients, and those who are liable to sudden motion, as when at sea, the limb, after being set, must be laid between two pillows, and the pillows fastened to the bed. It is, also, sometimes necessary to make the splints more secure, and this may be done by soaking a roller or bandage in whites of eggs, mixed with a little flour; or by strewing a little powdered rosin on the bandage, and afterwards soaking it with the spirits of wine; or, finally, by soaking the bandage with fine glue, which makes a firm case, and is far from being offensive.

Lastly, though splints and bandages, in general, are unnecessary during the cure; yet, when a patient rises from bed, rests the weight of his body on a fractured bone, and begins to be exposed to accidents, the splints laid along the limb should be made firm by a bandage or roller as above described, to prevent those accidents which may be incurred by precipitation and rashness.

In *fractures* of the *arm*, the parts hang naturally in the best posture, and require but two splints of thin pasteboard, rolled gently with a linen roller; and, in fractures of the forearm, the limb preserves its natural length or form; it requires merely to be laid upon a long splint of pasteboard, with a small splint laid above,

the two splints being secured with light ribands or tapes, and the arm, from the elbow to the finger's ends, supported by a sling or handkerchief round the neck, raising the palm of the hand to the breast, with the fingers moderately bent.

When the arm is fractured between the elbow and shoulder, the forearm may be placed in the same position, as already described; but the sling, instead of supporting the whole length of the arm, should only support the hand, which should be raised higher than in the former case, the elbow being allowed to sink; its motion, however, being prevented, by a handkerchief passed moderately tight round the trunk, including the fractured arm.

When the *small bones* happen to be fractured, they must be replaced and retained in their situation, by splints and bandages fitted to the part. In using splints of pasteboard or untanned leather, it is always necessary they should be applied, in the first instance, wet, so as to assume the form of the fractured part. After the first fortnight, the dressings should be occasionally removed, to allow some motion of the joints; and then replaced, and daily removed for the same purpose.

When there is an external wound, communicating with the cavity of the fracture, it is termed a compound fracture. This sometimes occurs by the protrusion of the bone; at other times by the same force which caused the fracture. In such cases, the bone is to be reduced by carefully attending to the posture of the limb, and by dilating the wound, when the bone becomes girded in it. The wound is then to be dressed with dry lint, in order to allow the blood to coagulate, which will form a kind of scab, and every effort should be made to unite the wound by the first intention, thereby converting the accident to the state of a simple fracture.

Almost all fractures are attended with contusion, and, consequently, swelling; the abating of which is the first step that should be taken towards the cure, and is to be effected by bleeding, if the patient be of a plethoric habit, by mild purges, a cooling regimen, and by the exhibition of the anodyne sudorific drops, as already described;

the application to the parts affected should be vinegar or lead-water, with crumbs of bread, or poultices made of stale beer, or vinegar and oatmeal, with a little oil to prevent their growing dry or stiff.

The swelling of the limb being subsided, and the callosus formed, cold water may be poured through the spout of a tea-kettle over the fractured limb, every morning, to restore the tone of the injured parts.

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### FRACTURES OF THE RIBS.

The ribs are broken for the most part, near the middle.

The accident usually proceeds from blows or falls, and is known by an acute pain in breathing, and a crepitus or grating being perceived, on pressing the rib in different places. By carefully passing the hand over the rib, the inequality produced by the fracture may be sometimes distinctly felt. Coughing produces a crepitation, which is frequently perceptible to the patient himself as well as to the bystanders.

The only treatment necessary, in simple fractures of the ribs, whether one or several be broken, is to keep the part, during the reunion, as much as possible in a state of rest. This is done by counteracting, to a considerable extent, their motion in respiration. To effect this, a bandage, six inches wide, is to be passed repeatedly round the chest, as tightly as the patient can suffer it to be drawn. Its slipping down may be prevented by means of a shoulder strap.

Or, instead of a roller, a jacket, of strong linen, capable of being drawn very tight, by means of tapes, may be used. Until the reunion be completed, the patient should be kept as quiet as possible.

If the lungs be wounded by a splinter of the rib, blood will be spit up, and high fever and inflammation will be likely to ensue. In this case, blood must be drawn copiously from the arm; and the patient should



be treated, in all respects, as if he were laboring under pleurisy.

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## BLOOD-LETTING.

The art of opening a vein, and the necessary caution respecting the operation, should be learned by every one; since cases of emergency may happen, when the necessity of its being performed is evident, and where life may be lost before medical assistance can be obtained. Another qualification necessary to be possessed, is that of being able to stop the flow of blood from a vein thus opened.

To bleed, you are to apply a riband or ligature with a degree of tightness, an inch or two above the elbow joint; and as soon as a vein is conspicuous, place the thumb of your left hand about an inch below the place of your puncture, and then with your right hand, holding the lancet firmly betwixt your thumb and fore finger, make an incision obliquely into the vein, without changing its direction, or raising the handle, lest the point, being lowered in proportion, should cut the under part of the vein, or perhaps even wound an artery.

When the quantity of blood you wish is drawn, untie the ligature, and close the orifice. To accomplish this, let the thumb be placed on the orifice, so as to bring its sides together, and to press it with a moderate force. The flow of blood will now be stopped, and the operator, with the hand, must apply a compress, made by twice doubling a piece of linen, about two inches square, between the orifice and his thumb; over this, place another compress, three or four inches square, of a thickness sufficient to fill up the hollow of the bend of the arm, confining the whole with a riband or tape, passing over the compress, and above and below the elbow, in the form of a figure eight, finishing with a knot over the compress.

If the bleeding continue obstinate, the sleeve of the

gown or coat above the orifice, ought to be ripped or loosened; and if this do not succeed, the lips of the incision should be brought nicely together, and while they are compressed firmly by the thumb of the operator, the coldest water should be poured on the arm, or orifice washed with sharp vinegar. The placing of a piece of adhesive plaster over the orifice in the vein generally succeeds in checking the flow of blood.

To bleed in the foot, a ligature must be applied above the ankle joint, and after opening the most conspicuous vein, if the flow of blood be not copious, it may be increased by immersion of the part in warm water. On removing the ligature, the blood will readily cease to discharge, and a piece of court-plaster is the best bandage. Topical blood-letting is executed by the application of leeches, as near as possible to the part affected, or by a scarificator, or an instrument with a number of lancets acted upon by a spring.

When leeches are employed, they must be previously prepared by drying them, or allowing them to creep over a dry cloth; and the part to attract them should be moistened with cream, sugar, or blood, and they confined on it by applying a wine glass over them.

When the scarificator is used, as soon as a wound is made, a cup exhausted of its atmospheric air, by burning over it, for a few seconds, a bit of soft paper dipped in the spirit of wine, and on the flame of which, being nearly exhausted, must instantly be applied over the scarified part; when full, it is easily removed by raising one side of it to admit air. When you have taken away, in this manner, a sufficient quantity of blood, the wounds are to be covered with some cream or mild ointment.

In the operation of blood-letting, certain morbid consequences at times arise, which demand a special treatment.

The most common of these, is a swelling of the part, termed *ecchymosis*; and when it occurs, shifting the position of the arm, so as to induce a free discharge, will lessen the tumor, if not entirely remove it. Should this fail, compresses, dipped in the solution of sal am-

moniac or brandy, are to be applied. These also failing, and the swelling still continuing, without any diminution, the tumor must be opened, and after removing the coagulated blood, the sore should be treated as a common wound. This result, however, very rarely occurs.

Another consequence, which sometimes follows blood-letting, is an acute pain immediately felt on the introduction of the lancet, and communicated from the part to the extremity of the member. The treatment of this complaint consists in the early use of cloths, wrung out of lead-water, applied to the part, and adopting, in every respect, the antiphlogistic plan, as blood-letting, cooling cathartics, and a low diet, to obviate inflammation.

This treatment not succeeding, laudanum must be given in large doses, which, also failing, a free division of the nerve or tendon, which was pricked with the lancet, is the only remedy left.

The last accident required to be noticed, is the wounding of an artery, which is known immediately after the operation, by strong compression of the vein, above and below the orifice, by the tremulous motion in which the blood flows, and by not being able to stop the discharge as usual. The cure of this affection may be attempted in the early stage by compressing, and observing the antiphlogistic regimen. On their failing, the tumor must be extirpated, and then the ends of the vessel secured by means of a ligature, until a reunion of the parts be effected, when the circulation is made to pursue a different channel.

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## ISSUES.

These are a kind of artificial ulcers, formed in different parts of the body, for the purpose of procuring a discharge of purulent matter, which is frequently of advantage in various disorders. Practitioners were formerly of opinion that issues served as drains to carry

off noxious humors from the blood; and, therefore, they placed them as near the affected part as possible. But as it is known that they prove useful, partly by the quantity of matter which they produce, and partly by sympathy, they are generally placed where they will occasion the least inconvenience. The most proper parts for them are, the nape of the neck; the middle, outer, and fore-parts of the shoulder; the hollow above the inner side of the knee; or either side of the backbone; or between two of the ribs; or whenever there is a sufficiency of cellular substance for the protection of the parts beneath. They ought never to be placed over the belly of a muscle; nor over a tendon or thickly covered bone; nor near any large blood-vessel. The issues commonly used, are the blister-issue, and the seton or cord.

When a blister-issue is to be used, after the blister is removed, a discharge of matter may be kept up by dressing the part daily with an ointment mixed with a little of the powder of cantharides, or Spanish flies. If the discharge be too little, more of the powder may be used; if too great, or if the part be much inflamed, the issue-ointment may be laid aside, and the part dressed with basilicon, or with common cerate, till the discharge be diminished, and the inflammation abated.

It is sometimes most proper to use the issue-ointment, and a mild one alternately.

A pea-issue is formed either either by making an incision with a lancet, or by caustic, large enough to admit one or more peas; though, sometimes, instead of peas, kidney-beans, a gentian root, or orange-peel, are used. When the opening is made by an incision, the skin should be pinched up and cut through, of a size sufficient to receive the substance to be put into it. But when it is to be done by caustic, (the common caustic,) or lapis infernalis of the shops answers best. It ought to be reduced to a paste with a little water or soft soap, to prevent it from spreading; and an adhesive plaster, with a small hole cut in the centre of it, should be previously placed, and the caustic paste spread upon the hole. Over the hole, an adhesive plaster should be



placed to prevent any caustic from escaping. In ten or twelve hours the whole may be removed, and in three or four days the eschar will separate, when the opening may be filled with peas, or any of the other substances above mentioned.

The seton is used when a large quantity of matter is wanted, and especially from deep-seated parts. It is frequently used in the back of the neck, for diseases of the head or eyes, or between two or three ribs, in affections of the baeast.

When the cord, which ought to be made of threads of cotton or silk, is to be introduced, the parts at which it is to enter and pass out, should be previously marked with ink, and a small part of the cord being besmeared with some mild ointment, and passed through the eye of the seton needle, the part is to be supported by an assistant, and the needle passed fairly through, leaving a few inches of the cord hanging out. The needle is then to be removed, and the part dressed. By this method, matter is produced in quantity proportioned to the degree of irritation applied; and this can be increased or diminished, by covering the cord daily before it is drawn, with an irritating or mild ointment.

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## OPHTHALMIA, OR INFLAMMATION OF THE EYES.

This disease may be occasioned by external injuries; as blows, burns, bruises, and the like. It may likewise proceed from dust, quick-lime or other substances, getting into the eyes. It is often caused by the stoppage of customary evacuations; as the healing of old sores, drying up of issues, the suppression of gentle morning sweats, or of the sweating of the feet. Long exposure to the night air, especially in cold northerly winds, or whatever suddenly checks the perspiration, especially after the body has been much heated, is very apt to cause inflammation of the eyes. Viewing snow, or other white bodies, for a long time, or looking steadfastly at

the sun, a clear fire, or any bright object, will likewise occasion this malady. A sudden transition from darkness to very bright light will often have the same effect.

Nothing more certainly occasions inflammation of the eyes than night-watching, especially reading or writing by candle-light. Drinking spirituous liquors, and excess of venery, is likewise very hurtful to the eyes. The acrid fumes of metals, and of several kinds of fuel, are also pernicious. Sometimes inflammation of the eyes proceeds from a venereal taint, and often from a scrofulous or gouty habit. It may likewise be occasioned by hairs in the eye-lids turning inwards, and hurting the eyes. Sometimes the disease is epidemic, especially after wet seasons; and I have frequently known it prove infectious, particularly to those who lived in the same houses with the patient. It may be occasioned by moist air, or living in low damp houses, especially in persons who are not accustomed to such situations. In children it often proceeds from imprudently drying up of scabbed heads, a running behind the ears, or any other discharge of that kind. Inflammations of the eyes often succeed the small-pox or measles, especially in children of a scrofulous habit.

*Symptoms.*—An inflammation of the eyes is attended with acute pain, heat, redness, and swelling. The patient is not able to bear the light, and sometimes he feels a pricking pain, as if his eyes were pierced with a thorn. Sometime he imagines his eyes are full of motes, or thinks he sees flies dancing before him. The eyes are filled with a scalding rheum, which rushes forth in great quantities, whenever the patient attempts to look up. The pulse is generally quick and hard, with some degree of fever. Where the disease is violent, the neighboring parts swell, and there is a throbbing of the temporal arteries.

A slight inflammation of the eyes, especially from an external cause, is easily cured; but when the disease is violent, and continues long, it often leaves specks upon the eyes, or dimness of sight, and sometimes total blindness.

If the patient be seized with a looseness, it is a good effect; and when the inflammation passes from one eye to another, as it were by infection, it is no unfavorable symptom. But when the disease is accompanied with a violent pain in the head, and continues long, the patient is in danger of losing his sight.

*Regimen.*—The diet, unless in scrofulous cases, can hardly be too spare. The patient must abstain from every thing of a heating nature. His food should consist chiefly of mild vegetables, and gruels. His drink may be barley-water, balm-tea, and common whey.

The patient's chamber must be darkened, or his eyes shaded by a cover, so as to exclude the light, but not to press upon the eyes.\* He should not look at a candle, the fire, or any luminous object; and ought to avoid all smoke, as the fumes of tobacco, or any thing that may cause coughing or sneezing. He should be kept quiet, avoiding all violent efforts, either of body or mind, and encouraging sleep as much as possible.

*Treatment.*—This is one of those diseases wherein great hurt is often done by external applications. Almost every person pretends to be possessed of a remedy for the cure of sore eyes. These remedies generally consist of eye-waters and ointments, with other external applications, which do mischief twenty times for once they do good. People ought, therefore, to be very cautious how they use such things, as even pressure upon the eyes often increases the malady.

Bleeding, in violent inflammation of the eyes, is always necessary. This should be performed as near the part affected as possible. An adult may lose ten or twelve ounces of blood from the jugular vein, and the operation may be repeated according to the urgency

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\* The best kind of shade for tender eyes is formed by extending green gauze on wire properly constructed. By this contrivance the access of too much light is effectually impeded, while there is no interruption to the free access of the air, so that the eyes are not heated by this; as by the common shades of silk, or spectacles of green glass.

of the symptoms. If it should not be convenient to bleed in the neck, the same quantity may be let from the arm, or any other part of the body.

Leeches are often applied to the temples, or under the eyes, with good effect. The wounds must be suffered to bleed for some hours, and if the bleeding stop soon, it may be promoted by the application of cloths dipt in warm water. In obstinate cases, it will be necessary to repeat this operation several times.

Opening and diluting medicines are by no means to be neglected. The patient at the same time must drink freely of water-gruel, tea, whey, or any other weak diluting liquor. He ought likewise to take, at bed-time, a large draught of very weak wine-whey, in order to promote perspiration. His feet and legs must frequently be bathed in lukewarm water, and his head shaved twice or thrice a week, and afterwards washed in cold water. This has often a remarkably good effect.

[ When the disease arises from atmospheric vicissitudes, it is sometimes called *Catarrhal Ophthalmia*, and may always be distinguished from other forms, by "the intolerance of light, and a constant sensation of sand in the eye." Blood-letting is rarely called for in this variety of the complaint. Purgatives, however, are indispensably necessary. Active doses of calomel and jalap should be given at first; and afterwards the bowels may be kept open by milder articles of the same class. Great benefit will result from the use of small doses of tartar emetic, given at regular intervals, so as to keep up a continued nausea at the stomach. Cold applications will rather increase the disease, and should never be used. Warm water, to which a little milk may be added, is the best local remedy that can be employed.]

If the inflammation does not yield to these evacuations, blisters must be applied to the temples, behind the ears, or upon the neck, and kept open for some time by the mild clystering ointment, or they may be frequently renewed, which is often preferable. I have seldom known these, if long enough kept open, fail to remove the most obstinate inflammation of the eyes;



but for this purpose it is often necessary to continue the discharge for several weeks.

For the purpose of allaying heat and inflammation of the eyes, some practitioners give the preference to warm instead of cold collyria; and among this number is Mr. Ware. The fact is, that inflammations of the eyes are known sometimes to yield to cold, and sometimes to warm fomentations. In cases of high irritation the warm may be used; but the alternate use of cold and hot applications has sometimes succeeded when neither of them singly appeared capable of putting an end to the diseased action.

When the disease has been of long standing, I have seen very extraordinary effects from a seton in the neck, or between the shoulders, especially the latter. It should be put upwards and downwards, or in the direction of the spine, and in the middle between the shoulder blades. It may be dressed twice a day with yellow basilicon. I have known patients, who had been blind for a considerable time, recover sight by means of a seton placed as above. When the seton is put across the neck, it soon wears out, and is both more painful and troublesome than between the shoulders; besides, it leaves a disagreeable mark, and does not discharge so freely.

[In cases of very long standing, great benefit may generally be derived from the use of small doses of tartar emetic and opium. Thirty grains of tartar emetic and ten grains of opium may be united and made into sixty pills; one of which should be taken every two or three hours.]

When the heat and pain of the eyes are very great, a poultice of bread and milk, softened with sweet oil or fresh butter, may be applied to them, at least all night; and they may be bathed, with lukewarm milk and water in the morning.

After the inflammation is gone off, if the eye still remains weak and tender, they may be bathed every night and morning with cold water and a little brandy, six parts of the former to one of the latter. A method should be contrived by which the eye can be quite im-

mersed in the brandy and water, where it should be kept for some time. I have generally found this, or cold water and vinegar, as good a strengthener of the eyes as any of the most celebrated collyria.\*

If ophthalmia be dependent on a venereal taint, mercury is the remedy to be depended upon for its removal. When it arises in a scrofulous habit, affecting the tarsi, or edges of the eye-lids, and is attended with ulcerations, as is often the case, copious purgation, together with frequent emetics, are imperiously demanded. Calomel, combined with aloes and rhubarb, should be given every day or two in doses sufficiently large to produce active catharsis. Or calomel alone may be given at night, and followed next morning by castor oil. In the acute stage, an emetic of tartar should be given every three or four days. At the same time that the use of these remedies is continued, the edges of the eye-lids may be smeared, morning and night, with a little ointment,† composed of mercury, or the sulphate of zinc.

[The sulphate of quinine has been used with great success in this variety of ophthalmia. Dr. McKensie says: "In most instances, its effects have been very remarkable; and, indeed, although I have met with a few cases which appeared to resist its beneficial influence, in most of the little patients to whom I have administered it, it acted like a charm. The dose which I employed is generally one grain thrice a day; and in very young children half a grain; and in adults two grains."]

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\* After the active stage of the inflammation has terminated, and the blood vessels of the eye appear turgid and relaxed, excellent effects are often found to result from letting a drop or two of the tincture of opium fall into the eye. In this state the eye will bear the application of active stimuli with more advantage than is commonly believed. In scrofulous inflammation of the eyes, sea-bathing, together with keeping the body open by gentle purgatives of sea-water, are eminently useful. I lately witnessed a case where the aqueous humor of the eye had become so turbid, that the patient, evidently of a scrofulous habit, could hardly distinguish light from darkness, which was almost wholly removed, and sight in a great measure restored, by persisting in a course of sea-bathing during the months of summer.

† Take Ointment of Nit. of Mercury,  
Prepared Lard, of each  $\frac{1}{2}$  ounce.  
Make an ointment.

Or, Take Sulphate of Zinc, 1 scruple.  
Prepared Lard, 1 ounce.  
Make an ointment.

It will be proper frequently to look into the eyes, to see if any hairs be turned inwards, or pressing upon them.\* These ought to be removed by plucking them out with a pair of small pincers.

Those who are liable to frequent returns of this disease ought constantly to have an issue in one or both arms. Bleeding or purging occasionally, will be very beneficial to such persons. They ought likewise to live with the greatest regularity, avoiding strong liquor, and every thing of a heating quality. Above all, let them avoid the night air and late studies. It may also be necessary, to prevent a return of ophthalmia, to continue the use of blisters behind the ears, or an issue or seton. The cold bath, employed by immersing the whole body, or by washing the head in cold water once or twice a day, is also a powerful means of prevention. Also, the application of cold water to the eyes themselves, or of any astringent collyrium, by means of an eye-cup, two or three times a day, may likewise be serviceable in preventing its return, or removing it after it has become habitual. Tonics have also been adopted with this intention, and with the best effects.

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#### DYSPEPSIA.—INDIGESTION.

[*Symptoms.*—Irregularity or want of appetite; occasional nausea; heartburn or pain at the pit of the stomach; flatulency of the stomach and bowels, eructation of sourish or other unpleasant tasted fluids; oppression at the stomach after eating, the food being often thrown up by mouthfuls in a half digested state; costiveness occasionally, colic pains; and general languor and debility. After the disease has lasted some time, the pulse becomes tense and quick, the upper part of the abdo-

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\* Any foreign body lodged in the eye may be expeditiously removed by passing a small hair pencil between the eye-lid and the ball of the eye. In some places the people do this very effectually by using their tongue in the same manner.

men tender to the touch; and the mind discontented, irritable and desponding.

*Causes.*—Overloading the stomach; cold, moisture; too frequent indulgence in the use of spirituous liquors; want of air and exercise; excessive evacuations; sucking children too long; emotions of the mind; other complaints.

Dyspepsia is the most frequent of all diseases, and although not of a highly dangerous character, yet the sufferings of its victims solicit the sympathy and skill of the physician, far more powerfully than the subjects of many of the more violent diseases. Every age, and class of society, are subject to its attacks. While other complaints are driven away by the change of seasons, or meliorated by climate, dyspepsia holds continual reign, through all seasons and in every region, poisoning every source of enjoyment, and shrouding its victims in gloom and despondency.

While every case of dyspepsia might be cured, it is rarely ever ameliorated. It is true, the most urgent and distressing symptoms are occasionally palliated, but a radical cure is seldom effected; the patient dragging out a miserable existence; the very name of his disease, from mistaken but prevalent notions, shutting him out from even the sympathy of his fellows.

The great number of dyspeptic cases unrelieved, has served to cast much unmerited opprobrium on the science of medicine, and is, indirectly, a most fertile cause of the growth and spread of empiricism. But the weight of the opprobrium should fall, not on the shoulders of medical science, nor on medical advisers, but on the patients themselves. It is perfectly useless to attempt to cure this disease, unless the invalid is thoroughly convinced of the necessity of changing his customary habits, and adopting a new rule of conduct; and determined to persevere in it to the end. He has been engaged for years, perhaps, in bringing on his complaint, and he cannot reasonably expect to have it cured in a few days or weeks.



The cause of indigestion is generally referred to debility of the stomach alone. Such, however, is not the case; the stomach is not the only organ concerned in digestion; and, in most instances, it is only affected in common with every other organ engaged in the digestive process. It may be, and doubtless often is, the first to suffer, as in the case of gormandizers, or where persons are addicted to the use of drugs and indigestible food; but it cannot suffer long without other organs becoming implicated.

*Treatment.*—The cause giving rise to the disease in each particular case, should be diligently sought out, and ever after carefully avoided. In this country, what is termed “bolting” the food, or swallowing it very fast, and almost wholly unchewed, is one of the most common causes of indigestion. It is saving time at a most wasteful expenditure of life. By this course, the individual is led to eat double the quantity that he would, were he to masticate his food well; while, at the same time, he imposes upon the stomach not only its own proper labor, but that of the teeth also. In recent cases, where dyspeptics find themselves addicted to this habit, eating slow, and at regular hours, chewing the food perfectly, and rising from the table before the appetite is satiated, will generally be sufficient to remove all the symptoms of the disease; and perseverance in this course will ensure a continuance of good health.

The health of an individual is commonly judged of from his appetite—the more he eats, or desires to eat, the louder are the congratulations of his friends on account of his good health. This is a fatal mistake. It is so far from being true, that some of the most miserable dyspeptics that have fallen under my notice, had, at times, appetites so ravenous, that it was utterly impossible to satisfy the morbid cravings of hunger by any amount of food. The body is not nourished and invigorated by the quantity of food taken into the stomach, but by the amount thoroughly digested. Consequently, where the digestive powers are weakened, and unable to bear hard labor, as in this disease, common sense

would teach us to lighten the burden—to regulate the quantity and quality of diet in accordance with their impaired energies.

But, a sudden change from a full, to a light, scanty diet, in cases where individuals have been accustomed to eating large meals, must not be attempted. The change must be gradual, and the reduction in quantity made daily, until the stomach is capable of managing all that is eaten, which may be known by a conspicuous amendment of all the symptoms. This matter can only be determined by experiment in each case. If a greater amount of food can be thoroughly digested than is taken, it ought to be increased; for too small a quantity, in such cases, will only add to the general debility. Experiment, also, in a majority of cases, must determine the kind of aliment taken—the best general rule being, to use such articles as set lightly on the stomach, without giving rise to vomiting, heartburn, or eructations; or being followed by a feeling of heaviness or dull pain several hours after eating.

Often, nothing is complained of except costiveness, and inability to eat certain kinds of food. In such circumstances, nothing more is necessary to a perfect cure than to obviate the condition of the bowels by appropriate medicine, and avoid eating the food giving rise to dyspeptic symptoms. It will generally be found, that when the bowels have regained their tone, and perform their duties without the aid of medicine, the patient can use every description of digestible diet with impunity, provided he take care to avoid the exciting causes of the disease. However, if he falls into costive habits again, the dyspepsia will return.

When the disease arises from excessive use of spirituous liquors, tobacco or opium, the treatment is obvious—*abandon them*. Snuff taking, in particular, is said by Dr. Cullen, from personal observation, to be unfavorable to digestion; and he mentions several cases of habitual want of appetite cured by leaving off the use of snuff. In cases of extreme weakness, one article of food alone should be used, as the stomach is more capable, under such circumstances, of managing a simple

than a compound diet. In general, it will be found that crackers, with a little milk at noon, are preferable.—Milk will often disagree with the stomach at first, but a few days' use of it will remove that difficulty. Fermented bread will always increase the violence of the symptoms. Bran bread, and that made of rye meal, have acquired great celebrity in this affection; which is, I apprehend, owing altogether to the husk of the grain possessing a slightly laxative property, and, to dyspeptics being induced to continue its use much longer than any other simple diet, from an idea that it possesses some occult quality. As before stated, however, it is impossible to describe a diet suitable to every case. Saccharine matter, in every form, has been supposed to be peculiarly noxious in dyspepsia; yet, Professor Charles Caldwell, who was much troubled with dyspepsia when young, says he took forty gallons of bitters and tonics in the course of a year without experiencing any amendment, and was then perfectly cured in three months while living almost entirely on *pound-cake*. Small meals of well boiled animal food, taken once a day, at noon, and well masticated, will be found preferable to other diet in most cases. Partake of one dish only at a meal, and use no drink at eating, nor for at least an hour afterwards. Avoid taking exercise immediately after eating, in order to let the whole energies of the system be concentrated in the stomach. Condiments are not admissible in any case. They create a factitious appetite, and induce the invalid to eat too much, without giving any aid to digestion. If the tongue be red, with a somewhat swelled abdomen, and tender to the touch, or a disposition to feverishness manifest itself, animal food is entirely inadmissible. Here the simplest diet is the best.

When dyspepsia arises from sedentary occupations, it can only be relieved by a change of business, or taking frequent and regular exercise. Walking is the best exercise; next to that riding on horseback; or active manual labor for an hour or two morning and evening. It must, of course, be proportioned to the strength of the invalid.

In cases arising from mental emotion, as grief, anxiety, &c., or general despondency, nothing will contribute so much to a restoration of health, as a change of scenery and companions; hence, visits to watering places, travel, and frequenting cheerful company will always be found to produce the happiest results.

Dyspeptics should make it an invariable rule to rise with the sun, and retire to bed early. Their dress must be adapted to the weather, and should always be of a warm, dry character. The more frequent occurrence of dyspepsia in the beginning of winter will show the importance of this.

The medicinal treatment of this disease is plain and simple. Much medicine is to be avoided, but a regular and constant use of it is indispensable. It must not be taken for a day or two, and then postponed a week. Without perseverance, no good will be obtained. The most distressing symptoms should be palliated; taking care not to lose sight of the main object—the entire restoration of the debilitated organs to their proper tone.

In cases of simple languor and debility of the stomach, with flatulency, a tea-spoonful of white mustard seed, taken two or three times a day, is highly spoken of as a remedy, in conjunction with diet. When there is great acidity of the stomach, lime water taken in sweet milk will give temporary relief; magnesia, however, is preferable, for while it corrects the symptom, it relieves the torpidity of the bowels. Many cases are reported where magnesia taken every day has effected a cure. I have found heartburn more constantly relieved by the use of minute portions of sulphuric acid (oil of vitriol) than by any other remedy. One or two drops of the acid to an ounce of water, of which a tea-spoonful may be taken every half hour, will rarely fail to give entire relief.

As habitual costiveness, alternating with occasional diarrhœa, accompanies dyspepsia in all its stages and aspects, attention to it is a matter of the first consequence. Violent purgatives are not to be resorted to. The object is not so much to *purge*, as to stimulate, as



far as possible, by the use of medicine, the natural action of the bowels. For this purpose, in ordinary cases, nothing will be found better than pills made of equal parts of rhubarb, aloes, and the sulphate of iron, (common copperas,) of which a number sufficient to procure two or three free, consistent evacuations of the bowels during the next day, are to be taken at bed-time. They must be used every night, or every other night, without intermission, until the disease is cured. Instead of causing debility, as some may apprehend, the patient will constantly gain strength under their operation. In cases attended with fever, small doses of ipecac. and aloes (1 gr. of ipecac. to 3 of aloes,) taken every three or four hours during the day will be found preferable.

Where yellowness of the eyes and skin is present, calomel or blue pill, in moderate portions, should be united with the regular purgative; taking care not to induce salivation; which may be avoided by ceasing their use at the first appearance of swelling or soreness of the gums.

In cases of great weakness, where the patient is easily fatigued by little exercise, with feeble pulse, cool skin, cold extremities, or rendered so on slight occasions, carbonate of ammonia, in doses of 8 to 10 grains, may be taken three or four times a day with benefit.

Much advantage may frequently be obtained where other organs besides the stomach are implicated, giving rise to pains and anomalous symptoms in different parts of the body, by the use of tartar emetic ointment rubbed on the breast or pit of the stomach daily, until an eruption like little biles is produced, and kept up by the occasional use of the ointment until the symptoms are relieved. Or, a blister may be resorted to instead of it. Friction over the whole surface of the abdomen with a flesh brush or coarse flannel, daily, will be found of great benefit.

A Mr. Halstead, some years since, acquired great credit for the cure of dyspepsia, and immense numbers professed to have been cured by him and his pupils. His principal treatment consisted in restricting his pa-

tients to regular diet, and kneading the stomach and bowels for half an hour every day, as a baker kneads dough.

In many cases of this disease, the lungs become sympathetically affected, giving rise to a very harassing cough. It has received the name of *Dyspeptic Consumption*. Night sweats, diarrhœa, and expectoration of pus, often attend it. No change or addition to the general treatment is called for, with the exception, perhaps, that counter-irritation to the chest, by tartar-ointment or blisters, is more imperiously demanded.

Bitters and tonics of every description are uncalled for, and injurious. Instead of invigorating, they are calculated to destroy the tone of the stomach, and give rise to symptoms as distressing as the disease itself.—They produce apparent amendment for a time, but the patient soon falls back into a more deplorable state than before he began their use.]

#### COLIC.—COLICA.

The colic has a great resemblance to the two preceding diseases, both in its symptoms and method of cure. It is generally attended with costiveness, and acute pain of the bowels; and requires diluting diet, evacuations, and fomentations.

[Colic may be distinguished from inflammation of the bowels, by pressing on the abdomen. In almost all cases of colic, pressure, rather relieves the pain than adds to its violence; but in every description of intestinal inflammation, even the slightest pressure will aggravate the painful symptoms.]

Colics are variously denominated according to their causes, as the *flatulent*, the *bilious*, the *hysteric*, and the *nervous*. And as each of these require a particular method of treatment, we shall point out their most general symptoms, with the means to be used for their relief.

The *flatulent*, or wind colic, is generally occasioned by an indiscreet use of unripe fruits, meats of hard digestion, windy vegetables, fermenting liquors, and such like. It may likewise proceed from obstructed perspiration, or catching cold. Delicate people, whose digestive powers are weak, are most liable to this kind of colic.

The flatulent colic may either affect the stomach or intestines. It is attended with a painful stretching of the affected part. The patient feels a rumbling in his bowels, and is generally relieved by a discharge of wind, either upwards or downwards. The pain is seldom confined to any particular part, as the vapor wanders from one division of the bowels to another, till it finds a vent.

When the disease proceeds from windy liquor, green fruits, sour herbs, or the like, the best medicine on the first appearance of the symptoms is a glass of brandy, gin, or any good spirits, or aromatic cordials combined with opiates. The patient should likewise sit with his feet upon a warm hearth-stone, or apply warm bricks to them; and warm clothes may be applied to his stomach and bowels. If costiveness prevail, some general laxative may be given.

This is the only colic in which ardent spirits, spiceries, or any thing of a hot nature may be ventured upon. Nor indeed are they to be used here, unless at the very beginning, before any symptoms of inflammation appear. We have reason to believe that the colic occasioned by wind or flatulent food might always be cured by spirits or warm liquors, if they were taken immediately upon perceiving the first uneasiness; but when the pain has continued for a considerable time, and there is reason to fear that inflammation of the bowels is already begun, all hot things are to be avoided as poison, and the patient is to be treated in the same manner as for inflammation of the intestines.

["Dry frictions with flannels or a flesh-brush, is an excellent means for removing flatulent pains of the stomach. By rapid frictions on the pit of the stomach, the wind is generally discharged in copious torrents, and where there is no fixed irritating cause in the stomach

that requires removal, we may often, in this way, put a termination to the gastric pains. From five to ten grains of camphor, with about thirty drops of vitriolic ether, and the same quantity of laudanum, has frequently afforded prompt relief in my hands. The oil of juniper or the spirits of turpentine will also generally allay the pain in slight cases.”]

Several kinds of food, occasion colics in some particular constitutions. I have generally found the best method of cure for these was to drink plentifully of small diluting liquors, as water-gruel, small posset, toast and water, &c.

Colics which proceed from excess and indigestion, generally cure themselves by occasioning vomiting or purging. These discharges are by no means to be stopped, but promoted by drinking plentifully of warm water. When their violence is over, the patient may take a dose of rhubarb, or any other gentle purge, to carry off the dregs of his debauch.

[A combination of castor oil with spirits of turpentine, is one of the most prompt and efficacious remedies that can be employed in cases arising from the presence of acrid or irritating substances in the bowels. It frequently happens, however, that the sufferings of the patient are so great, that relief must be obtained, if possible, before a cathartic could have time to operate. In such cases, opium is the only sure dependence. It should be given in doses of one or two grains, and repeated until the object is effected.]

Colics which are occasioned by wet feet, or catching cold, may generally be removed at the beginning by bathing the feet and legs in warm water, and drinking such warm diluting liquors as will promote perspiration, as weak wine-whey, or water-gruel with a small quantity of spirits in it.

Those flatulent colics, which prevail so much among country-people, might generally be prevented, were they careful to change their clothes when they get wet. We do not mean to recommend the practice of dram-drinking, but in this case ardent spirits prove a real medicine, and indeed the best that can be administered.



A glass of good peppermint-water will have nearly the same effect as a good glass of brandy, and in some cases is rather to be preferred.

The *bilious* colic is attended with very acute pains about the region of the navel. The patient complains of great thirst, and is generally costive. He vomits a hot, bitter, and yellow-colored bile, which, being discharged, seems to afford some relief, but is quickly followed by the same violent pain as before. As the distemper advances, the propensity to vomit sometimes increases so as to become almost continual, and the proper motion of the intestines is so far perverted, that there are all the symptoms of an impending iliac passion.

If the patient be young and strong, and the pulse full and frequent, it will be proper to bleed, after which purgatives may be administered. Clear whey or gruel sharpened, with the juice of lemon and cream of tartar, must be drank freely. Small chicken-broth, with a little manna dissolved in it, or a slight decoction of tamarinds, is likewise very proper, or any other thin, acid, opening liquor.

[When spontaneous vomiting does not occur to any great extent, the exhibition of an emetic should be among the first remedies resorted to in bilious colic. After the operation of the emetic is over, calomel should be exhibited in repeated doses until the irritability of the stomach is allayed. It will be retained when every other cathartic will be rejected; especially if assisted by the application of mustard draughts to the pit of the stomach. As soon as there is a probability of their being retained, some one of the purgatives mentioned in the treatment of bilious fever may be administered; and the action of the bowels kept up by the regular use of them until the patient is entirely relieved.]

Besides bleeding and plentiful dilution, it will be necessary to foment the belly with cloths dipped in warm water, and if this should not succeed, the patient must be immersed up to the breast in warm water.

In the bilious colic, the vomiting is often very difficult to restrain. When this happens, the patient may drink a decoction of toasted bread, or an infusion of garden-

mint in boiling water. Should these not have the desired effect, the saline draught, with a few drops of laudanum in it, may be given, and repeated according to the urgency of the symptoms. A small quantity of Venice treacle may be spread in form of a cataplasm, and applied to the pit of the stomach. Clysters, with a proper quantity of Venice treacle or liquid laudanum in them, may likewise be frequently administered.

The *hysteric* colic bears great resemblance to the bilious. It is attended with acute pains about the region of the stomach, vomiting, &c. What the patient vomits in this case is commonly of a greenish color. There is a great sinking of the spirits, with dejection of mind and difficulty of breathing, which are the characteristic symptoms of this disorder. Sometimes it is accompanied with the jaundice, but this generally goes off of its own accord in a few days.

In this colic all evacuations, as bleeding, purging, vomiting, &c., do hurt. Every thing that weakens the patient, or sinks the spirits, is to be avoided. If, however, the vomiting should prove violent, lukewarm water may be drank to cleanse the stomach. Afterwards the patient may take fifteen, twenty, or twenty-five drops of liquid laudanum in a glass of cinnamon-water. This may be repeated every ten or twelve hours, till the symptoms abate.

The patient may likewise take four or five of the foetid pills every six hours, and drink a cup of penny-royal tea after them. If asafœtida should prove disagreeable, which is sometimes the case, a tea-spoonful of the tincture of castor in a cup of penny-royal tea, or thirty or forty drops of the balsam of Peru dropped upon a bit of loaf-sugar, may be taken in its stead.

The *nervous* colic prevails among miners, smelters of lead, painters, the manufacturers of white lead, &c. It is very common in the cider counties of England, and is supposed to be occasioned by the leaden vessels used in preparing that liquor. It is likewise a frequent disease in the West Indies, where it is termed the dry belly-ache.

No disease of the bowels is attended with more ex-

cruciating pain than this; nor is it soon at an end. I have known it continue eight or ten days with very little intermission, the body all the while continuing bound in spite of medicine, yet at length yield, and the patient recover. It generally, however, leaves the patient weak, and often ends in palsy.

The general treatment of this disease is nearly the same with that of the iliac passion, or inflammation of the bowels. The body is to be opened by mild purgatives given in small doses, and frequently repeated, and their operation must be assisted by soft oily clysters, fomentations, &c. The castor oil is reckoned peculiarly proper in this disease. It may both be mixed with the clysters, and given by the mouth, in dose of one, two, or three table-spoonful.

[The most certain remedy in this disease, and the one relied on by almost every physician who has had much experience in it, is calomel, carried to the extent of producing slight salivation. For this purpose, from five to ten grains of calomel with half a grain of opium should be given every four hours, until the gums begin to redden or swell. As soon as these effects are produced, castor oil and turpentine, or senna tea with epsom salts in solution, should be exhibited, and repeated if necessary until the bowels are freely evacuated. This treatment may be continued for a week or two with advantage in the generality of cases; taking care to repeat the calomel whenever the gums lose their tenderness. "*Alum* is much praised by the German physicians in the treatment of this disease. Richter declares that it will sometimes procure relief, where opium and all other remedies fail." In violent cases, twenty grains of alum with one grain of opium may be given every three hours until the pain is allayed; to be followed by the treatment recommended above. The diet should consist, throughout the whole course of the disease, of fat animal broths, or chicken-water; and the patient should carefully avoid drinking cold water or stimulating fluids.

The use of sulphuric acid has recently been recommended to persons exposed to the causes of painters' colic. Eight or ten drops of elixir vitriol may be taken



in half a glass of cold water twice a-day. The acid by uniting with the lead forms an inert compound, and this destroys its poisonous properties.]

If the patient remain weak and languid after this disease, he must take exercise on horseback.

To avoid this kind of colic, people must shun all sour fruits, acid and austere liquors. Those who work in lead ought never to go to their business fasting, and their food should be oily or fat. They may take a glass of salad oil every morning, but should never take spirits. Liquid aliment is best for them; but low living is bad. They should frequently go a little out of the tainted air; and should never suffer themselves to be costive. In the West Indies, and on the coast of Guinea, it has been found of great use, for preventing this colic, to wear a piece of flannel round the waist, and to drink an infusion of ginger.

Sundry other kinds of this disease might be mentioned, but too many distinctions would tend only to perplex the reader. Those already mentioned are the most material, and should, indeed, be attended to, as their treatment is very different. But even persons who are not in a condition to distinguish very accurately in these matters, may nevertheless be of great service to patients in colics of every kind, by only observing the following general rules, viz: To bathe the feet and legs in warm water; to apply bladders filled with warm water, or cloths wrung out of it, to the stomach and bowels; to make the patient drink freely of diluting mucilaginous liquors; and to give him an emollient clyster every two or three hours. Should these not succeed, the patient ought to be immersed in warm water.

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#### GRAVEL AND STONE.—LITHIASIS.

These diseases are the consequence of a peculiar disposition of the fluids, and more particularly the secretion of the kidneys to form a calculous matter, and have been supposed to be owing to the presence of an



acid principle in them, called the uric acid; an opinion which seems to be confirmed by the benefit derived from a course of alkaline medicines.

When small stones are lodged in the kidneys, or discharged along with the urine, the patient is said to be afflicted with the gravel. If one of these stones happen to make a lodgment in the bladder for some time, it accumulates fresh matter, and at length becomes too large to pass off with the urine. In this case the patient is said to have the stone.

*Causes.*—The stone and gravel may be occasioned by high living; the use of astringent wines; a sedentary life; lying too warm, soft, or too much on the back; the constant use of water impregnated with earthy or stony particles; aliments of an astringent or windy nature, &c. It may likewise proceed from hereditary disposition. Persons in the decline of life, and those who have been much afflicted with the gout or rheumatism, are most liable to it.

*Symptoms.*—Small stones or gravel in the kidneys occasion fixed pain in the loins, sickness, vomiting, and sometimes bloody urine, and not unfrequently a slight suppression of urine. When the stone descends into the *ureter*, and is too large to pass along with ease, all the above symptoms are increased; the pain extends towards the bladder; the thigh and leg of the affected side are benumbed; the testicles are drawn upwards, and the urine is obstructed.

A stone in the bladder is known from the pain at the time, as well as before and after making water; from the frequent inclination to void the urine; the urine coming away by drops, or stopping suddenly when it was running in a full stream; by a violent pain in the neck of the bladder upon motion, especially on horse back, or in a carriage on a rough road; or from a white, thick, copious mucous sediment in the urine; an itching at the top of the *penis*; bloody urine; an inclination to go to stool during the discharge of urine; the patient's passing his urine more easily when lying than

in an erect posture; from a kind of convulsive motion occasioned by the sharp pain in discharging the last drops of the urine; and lastly from sounding or searching with the sound, which is the only symptom to be depended upon.

When gravel has once formed in the pelvis of the kidneys, or elsewhere, it continues to increase by receiving on its surface new layers of uric acid successively precipitated, of which any one may be convinced by cutting the concretions transversely, which enables us to perceive that they are almost entirely composed of concentric layers.

*Regimen.*—Persons afflicted with the gravel or stone should avoid aliments of a heating nature, as salt meats, sour fruits, &c. Their diet ought chiefly to consist of such things as tend to promote the secretion of urine, and to keep the body open. Artichokes, asparagus, spinach, lettuce, parsley, succory, surslane, turnips, potatoes, carrots, and radishes, may be safely eaten. Onions, leeks, and celery are, in this case, reckoned medicinal. The most proper drinks are whey, buttermilk, milk and water, barley-water; decoctions or infusions of the roots of marsh-mallows, parsley, liquorice, or of other mild mucilaginous vegetables.

Gentle exercise is proper, but violent motion is apt to occasion bloody urine. We would, therefore, advise that it should be taken in moderation. Persons afflicted with the gravel often pass a great number of stones after riding on horseback, or in a carriage; but those who have a stone in the bladder are seldom able to bear these kinds of exercise. When there is a hereditary tendency to this disease, a sedentary life ought never to be indulged. Were people careful, upon the first symptoms of gravel, to observe a proper regimen and to take sufficient exercise, it might often be carried off, or at least prevented from increasing, but if the same course which occasioned the disease is persisted in, it must be aggravated.

*Treatment.*—In what is called a fit of the gravel,

which is commonly occasioned by a stone lodging in the *ureter*, or some part of the urinary passages, the patient must be bled; warm fomentations should likewise be applied to the part affected, emollient clysters administered, and diluting mucilaginous liquors drank. The treatment of this case has been fully pointed out under the articles *Inflammation of the Kidneys and Bladder*, to which we refer.

When the preference is given to a palliative mode of treatment of stone in the bladder, in males, instead of resorting to the operation of lithotomy, lithontriptics, which retard or prevent the farther accumulation of calculous matter, may be had recourse to; for example, the fixed alkali, which is not only the most powerful, but the one most generally employed, and which may be used both in the caustic and mild state.

Twenty or thirty drops of a strong solution of potash may be taken three times a day, in a tea-cupful of veal broth, gradually increasing the dose from day to day. The carbonate of soda has also been used with advantage, in doses of from one scruple to half a drachm three times a day. Lime water has been occasionally employed with benefit, though it must be taken in large quantities to have much effect. From a pint to a quart, mixed with sweet milk, should be taken every day.

The aerated potash is a preparation somewhat similar in its nature to the aerated alkaline water, and is now used at St. Bartholomew's hospital, and given in doses of two drachms dissolved in a pint of distilled water, twice a day. It consists of half an ounce of the subcarbonate of potash, five drachms of distilled water, and one drachm of subcarbonate of ammonia. The potash being dissolved in a water bath, the ammonia is to be added; and when the effervescence is at an end, the mixture is set aside to crystalize.

Though the caustic alkali and soap-lees, and lime water, are the most powerful medicines which have hitherto been discovered for the stone, yet there are some things of a more simple nature, which in certain cases are found to be beneficial, and therefore deserve a trial. An infusion of the seeds of *daucus slyvestris*,

or wild carrot, sweetened with honey, has been found to give considerable ease in cases where the stomach could not bear any thing of an acrid nature. A decoction of raw coffee-berries taken morning and evening, to the quantity of eight or ten ounces, with ten drops of sweet spirit of nitre, has likewise been found very efficacious in bringing away large quantities of earthy matter in flakes. Honey is likewise found to be of considerable service, and may be taken in gruel, or in any other form that is more agreeable.

It is the opinion of Dr. Duncan that a solution of the subcarbonate of soda in pure water (in the proportion of a scruple to a pint) is preferable to the aerated soda water, on account of the carbonic acid gas being disengaged on exposure to the atmosphere. On the addition of a small quantity of lemon-juice, or acid of tartar, a very agreeable effervescence is produced. The carbonate of soda, by being combined with an excess of carbonic acid gas in this preparation, is rendered not only more pleasant to the taste, but less liable to offend the stomach; and Dr. Duncan is of opinion that it is the only form in which the soda can be exhibited in sufficient doses, and for a length of time, so as to derive any benefit from its use.

[The following preparation offers, perhaps, as great a prospect of relief, as any remedy that has been employed for the purpose of ameliorating the condition of those who are afflicted with gravel or stone. The dose is, a piece the size of a nutmeg taken three times a day.

Take	Spermaceti, one ounce.
	White soap, half an ounce.
	Curcuma, two drachms.
	Venice turpentine, two drachms.
	Oil of anise, twenty drops.
	Honey, a sufficient quantity to make the whole into a thick mass. ]

Muriatic acid (particularly in what is called the phosphatic\* diathesis) given in doses of twenty or thirty

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\*For an account of four species of calculus noticed by Dr. Wallaston and Dr. G. Pearson, see Medical and Chirurgical Review, Vol. iv. p. 486. Vol. v. p. 386.



drops, three or four times a day, diluted with water, has been found, in several cases where gravel was expelled from the bladder, to afford considerable benefit, and to appease the pain in micturition; and is found, moreover, to be a powerful lithontriptic.

The only other medicine which we shall mention is the *uva ursi*. It has been greatly extolled of late, both for the gravel and stone. It seems, however, to be in all respects inferior to the soap and lime-water; but it is less disagreeable, and has frequently, to my knowledge, relieved gravelly complaints. It is generally taken in powder, from half a drachm to a whole drachm, two or three times a day. It may, however, be taken to the quantity of seven or eight drachms a day, with great safety and good effect.

Most people troubled with the stone are guilty of one great error; they put off the operation too long. When it is certainly known that there is a stone in the bladder, and that it is too large to get along the urethra, no time ought to be lost in having it cut out, before the patient's habit becomes too irritable, or the stone is so far increased in size, that it cannot be extracted without a laceration of the parts.\*

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### NEGRO CONSUMPTION.—SCROFULA.

[The great scourge of the African race, in the United States, is Scrofula, which, under the vague name of "negro poison," or "negro consumption," carries annually hundreds to their graves.† While they are exempt,

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\*A teaspoonful of pure magnesia taken two or three times a day has of late been discovered to be a most effectual preventive of the gravel and stone, and is of service where alkalis fail to relieve the increased secretion of uric acid, and to prevent its forming calculi in the kidneys; it also agrees better with the stomach.

† In the preparation of this article, I have availed myself of the only publication which I have ever met with on the subject,—namely, "Remarks on Struma Africana," &c. By Lunsford P. Yandell, M. D. Dr. Y had much experience in the disease.

in a remarkable degree, from many of the diseases which prevail among the white population, there is scarcely a negro to be found in the middle and northern States free from a scrofulous taint. It is hereditary, and often comes on when it has not been invited by exposure, or poor living. The frequency of the disease, however, results from the inaptitude of the climate. The delicate organization of the human frame enables man to adapt himself to every climate, but it renders him, at the same, more liable to disease. And the condition of the negroes precludes the exercise of that ingenuity, by which the free man is enabled to shield himself against the rigors of the frigid, and the sultry heat of the torrid zone. We find this disease to abound as we travel to the north, and to become less common as we approach the region in which nature cast their lot. Indeed, it is stated, by all authorities, that notwithstanding the frequency of the disease among the blacks in this climate, scrofula is an unknown disease in Africa. They were fitted to inhabit under a different track of the sun, and nature thus shows that her laws may not be infringed with impunity.

Cold is generally regarded as the most powerful of the exciting causes of scrofula. In the East and West Indies, says Dr. Gregory, "scrofula is hardly known; but when the natives are either brought into this, or any other European country, they suffer from it severely." "The prevalence of scrofula," he continues, "is directly proportioned to the coldness, or more properly to the variability of the climate." Lloyd enumerates "the common debilitating powers of cold, meagre or unwholesome food, want of cleanliness, and a close and suffocating atmosphere," as the most prolific sources of strumous complaints. Dr. Good considers the removal from an intertropical region, where the frame has been debilitated, to countries of a lower temperature, as the most productive cause. The cold, he remarks, is not so pernicious when it is constant, and not connected with moisture and impurities, or favored by a scanty or innutritious diet. A French writer says, "that exposure to prolonged cold is the most pow-

erful of the causes which may induce pulmonary consumption; and that on the contrary, living in a warm place is so powerful a remedy against the disease, that it is of itself sufficient to cure it in all cases where the evil has not reached its highest degree." The same remarks are quite as applicable to scrofula, of which consumption, in fact, is but a modification. The action of cold, therefore, we may say, is the exciting cause of the disease under consideration, and its efficacy, of course, is greatly increased, when favored by hereditary predisposition and deficient clothing.—(Yandell.)

*Symptoms.*—The skins of negroes who have the scrofulous taint, are uniformly of a pale, dry, and husky or branny appearance. They have, while still able to attend to business, an inanimate and unhealthy look. The tongue and gums are pale, the former often covered with a white mucus. The cornea (or transparent part of the eye) has a bluish white color. The nostrils and upper lip are generally somewhat protruded. The circulation at first is languid; they bear cold badly; but as the disease progresses, and the tubercles commence their growth, there is some development of arterial excitement. The pulse becomes quick and irritable, and the heat of the skin is raised. The whole expression of the face, and all the movements of the individual evidence deep-seated disease. In the progress of the complaint, respiration is disturbed; the breathing becomes quick and laborious, and on slight exertion, the patient has the appearance of panting. The lungs seem confined, as if wanting room to dilate. The patient often groans in his sleep. The abdomen becomes tumid; occasionally, towards the termination of the disorder, fluctuation is perceived. The urine is generally scanty; bowels at first constipated, but disturbed towards the close of the disease by intractable diarrhœa. The febrile excitement during the whole progress of the disease is never very high. The inflammation seems of the sub-acute kind. An enlargement of the lymphatic glands of the neck sometimes accompanies these symptoms, which is not unfrequently a fa-

vorable symptom, evidencing that the disease is disposed to attack external parts. Cough sometimes attends, but not invariably. The appetite is generally unimpaired; occasionally vitiated. The patients complain but little; and there seems nothing in their case to account for the decline in flesh and strength which we see steadily progressing. There is no more remarkable feature in the disease than this. In fact, it is this circumstance that gives rise to the general impression among the blacks, and among a great majority of the whites, that such patients are poisoned.

So general is this belief among all classes, that there is hardly a neighborhood in which there does not reside an individual who has to bear the weighty charge of poisoning, by the actual administration of some unknown drug, or by "spells and incantations," every individual who is afflicted with the disease under consideration. It is not considered necessary that the poison should be swallowed by the unfortunate sufferer, or even come in contact with him;—it is all-sufficient that it be prepared *for him*, with certain mystic ceremonies, "or laid in his path," and its work of destruction proceeds with a slow but certain pace. However much the better informed may be disposed to smile at so ridiculous an idea, it has a far different effect on the negro. A hint or a suspicion that the "charm has been laid," has as powerful an effect upon his uneducated mind, as the dreaded "Obeah" has upon his brethren of the West Indies—operating upon his superstitious fear, it brings disease and death.

*Treatment*.—Much may be done in the prevention of this disease; more perhaps than in most others; for the causes of few others are so well traced. Too little care is paid generally by masters to the comfort and cleanliness of their slaves. Their houses should be roomy, raised considerably above the ground, and so constructed as to admit of free ventilation. To attain the latter end, it is important that they be not too much crowded. Negroes require to be warmly clad in winter; and attention should be paid, especially to the



children, that their clothing be often enough changed. This is important on more accounts than one. Dr. Rush, in his inquiry into the influence of physical causes upon the *moral* faculty, remarks, "that too much cannot be said in favor of *cleanliness*, as a means of promoting virtue." I can imagine few things which would contribute more to the health, comfort, and good conduct of slaves, than an increased attention on the part of their owners to cleanliness in their dress and habitations.

Another object of the highest importance is to keep them *warm*. Many white persons find it indispensable to their health to wear flannel during the winter, which alone affords them adequate protection against the sudden transitions of our variable climate. The same may be done by feeble negroes, and especially by those predisposed to scrofula, who certainly are at least as much affected by the dampness and coldness of our winters, as their masters. By this simple measure I have seen many beings, who appeared to be in the incipient stage of the disease, invigorated and made to enjoy good health. The diet of our black population, as a general rule, is simple, nutritive and abundant; and with a little more attention to their clothing—the addition of a flannel shirt to their winter-suit—I doubt not that the lives of numbers who now die yearly of the dreaded "negro-poison," might be preserved. Children predisposed to the complaint, have frequently a depraved appetite, causing them to eat dirt, and the parents generally from a mistaken view of the cause of the practice, attempt to correct it by the application of the rod. This propensity is easily destroyed, and the general tone of the system at the same time improved, by the administration of any of the preparations of iron.—(Yandell.)

The general treatment of "negro consumption," is the same recommended in the preceding article on "Scrofula." Emetics, purgatives, and a strict adherence to a bland, unstimulating diet, can alone be relied on for success. The use of the root of the poke-weed, and iodine, has frequently been attended with the hap-

piest results, but they cannot be recommended as specifics.

"In countries where a meagre or innutritious diet is one of the causes of scrofula, a plan of treatment so antiphlogistic as the one which has been recommended, would be deemed unnecessary, perhaps positively injurious. But among the people who inhabit our fruitful country, where the diet used is so stimulating, where disease is so generally inflammatory, and so often modified by the prevalence of malaria (poisonous air,) our resort, in nearly all our complaints, must be to depleting and alternative remedies.

If by means of emetics, cathartics, &c., we have succeeded in arresting the disease, our next object is to remove the predisposition to the complaint, and invigorate the system. In effecting this, the mineral acids, and especially the nitric, or, which is perhaps superior, the nitro-muriatic, are among the best remedies. Their impression is gentle, and at the same time permanent." They may be given as directed in the chronic inflammation of the liver. The sulphate of quinine is also a valuable tonic in such cases. Three or four grains may be administered at regular intervals every day. "The different forms of iron should be preferred for children, when it is our wish to ward off the disease; and they have great efficacy also in building up the exhausted energies of the frame, when all inflammatory action is subdued.]—(Yandell.)

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#### ST. VITUS' DANCE,—CHOREA.

The disease termed Chorea, or St. Vitus' Dance, generally attacks young people from the eighth year of their age to the time of puberty; though it has been sometimes found to occur at a more advanced period of life. Females are more liable to it than males. The first symptom of this disease is generally a slight lameness of one leg, which the patient drags a little, and seems to have lost the power of duly regulating its action. The arms next become affected, and are thrown into

various contortions, which deprive persons affected with this disease of the power of feeding themselves, and their awkward gesticulations in attempting to bring articles of food towards their mouth appear ridiculous.— One side of the body is in general more affected than the other. The tongue participates of the general disease of the system, so as to render articulation nearly unintelligible. If the disease continue long, it materially injures the constitution, sleep becomes disturbed or is in a great measure prevented, the mental faculties are impaired, and revert to childishness; pain is often felt in the stomach, the appetite for food is extremely irregular, being occasionally ravenous; the countenance appears pale and languid, and the body and limbs are much emaciated.

The feebleness and debility caused by this disease, seem to have influenced the routine of practice pursued in the treatment of it. The remedies generally recommended are accordingly of the tonic class, such as Peruvian bark, steel, bitters, preparations of zinc and copper, cold bathing, and electricity. Notwithstanding the administration of these remedies, chorea has generally proved a tedious and untractable disease, continuing to harass the patient for months and even years, not unfrequently occasioning permanent injury to the faculties of the mind as well as the powers of the body.

Dr. James Hamilton, of Edinburgh, in his late valuable publication on "The utility and administration of purgative medicines," has promulgated so just a view of the nature and origin of the complaint now under consideration, accompanied with a mode of cure so judicious and successful, that it becomes a duty to diffuse a knowledge of his opinions and practice as extensively as possible.

Respecting the plan of treating this disease which has hitherto prevailed, the Doctor observes, "It is melancholy to reflect that months and years, the most valuable in respect of after life, should glide on, while an effectual check is given to the improvement of the mind, the cultivation of useful learning, or the acquisition of necessary arts; with the hazard of permanent fatuity,

to a certain extent, or of a grotesque appearance, from the unconquerable remains of irregular motions being imposed on the young sufferers for life. To these certain consequences of protracted chorea, I will add, the danger that attends it; I have no doubt, but it must have, on some occasions, proved fatal."

The remedies which that enlightened practitioner has found eminently successful in the cure of this disease, consists of active purgatives. From three to five grains of calomel combined with ten or fifteen of jalap; or a sufficient quantity of the aloetic pill, occasionally interposing a proper dose of the tartar zed infusion of senna, are so administered as to produce full purging daily, which is to be kept up till the progress of the disease is found to be arrested.

The emaciation and apparent debility of the subjects of this disease, and the unfounded alarms of their friends lest these symptoms should be increased by evacuations, are apt to shake the resolution of the practitioner, and prevent him from following out this practice to a due extent. But the diminution of the involuntary motions, the general appearance of returning health visible in the countenance, and the regularity of the appetite for food, are the circumstances that should regulate his conduct; and their presence ought to encourage him to proceed notwithstanding the weakness of the patient. The quantity of *faeces* discharged during the administration of these medicines is sometimes so enormous as to exceed belief; and this circumstance affords ground to suppose, either that their retention, or the torpor and inactivity of the bowels, is a chief source of this complaint. The evacuations from the bowels ought to be daily and attentively inspected, and the return of their natural appearance and quantity will be found to indicate and keep pace with the renovation of health.

Dr. H. adds, "Since I have employed purgatives in chorea, I have been disappointed in effecting a cure in one case only." To this statement I can add, my testimony of the complete success of this mode of treatment in three instances in which I have made trial of it.

When the complaint is subdued, the complete resto-



ration of health and vigor is best effected by the use of a light and nutritious diet, with a moderate quantity of wine, due exercise in the open air, and bathing in the sea if convenient. A powder composed of five grains of the rust of iron, together with ten of rhubarb, and an equal quantity of fine sugar, may also be taken every morning for some weeks with advantage.

[After proper depletion, by purgatives, in this disease, the oil of amber has been used with decided benefit. It should be given in doses of ten drops, three times daily. Frictions with the oil should also be made along the whole course of the spine, several times a day.

Some people, particularly pregnant women, are very subject to spasmodic contractions of the joints, coming on periodically, and attended with very violent pain; for the removal of these, anodyne frictions appear to be the best remedy.

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### CRAMP OF THE STOMACH.

This disease often seizes people suddenly, is very dangerous, and requires immediate assistance. It is most incident to persons in the decline of life, especially the nervous, gouty, hysteric, and hypochondriac.

If the patient has any inclination to vomit he ought to take draughts of warm water, or weak camomile tea, to cleanse his stomach. After this, a laxative clyster may be given. He ought then to take laudanum. The best way of administering it is in a clyster. Sixty or seventy drops of liquid laudanum may be given in a clyster of warm water. This is much more certain than laudanum given by the mouth, which is often vomited, and in some cases increases the pain and spasms in the stomach.

If the pain and cramps return with great violence, after the effects of the anodyne clyster are over, another with an equal or larger quantity of opium, may be

given; and every four or five hours a bolus, with ten or twelve grains of musk, and half a drachm of the Venice turpentine. In the mean time the stomach ought to be fomented with cloths dipped in warm water, or bladders filled with warm milk and water should be constantly applied to it. I have often seen these produce the most happy effects.

[In violent cases, a mixture of equal parts of laudanum and ether should be exhibited, in doses of a teaspoonful, every twenty minutes, until relief is obtained. The use of this mixture, however, should be preceded by the administration of a large dose of castor oil and turpentine. The warm bath is also an admirable remedy in such cases, and should be resorted to as soon as possible after the commencement of the attack. Copious draughts of cold water, have been known to relieve cramp of the stomach in a very few minutes. Cold injections have also been used with the most perfect success. After the more violent symptoms have been relieved, purgatives, should be regularly administered for several days, or until the secretions from the liver and bowels become natural and healthy.]

In very violent and lasting pains of the stomach, blood ought to be let, unless the weakness of the patient forbids it. When the pain or cramps proceed from suppression of the *menses*, bleeding is of use. If they be owing to the gout, recourse must be had to spirits or some of the warm cordial waters. Blistering plasters ought likewise, in this case, to be applied to the ankles. I have often seen violent cramps and pains of the stomach removed by covering it with a large plaster of treacle of the Lyndon Dispensatory.

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#### SARDONIC LAUGH.—RISUS SARDONICUS.

This disease is principally characterized by a fit of laughter, arising without any evident cause, and often continuing in a violent degree for three or four nights, so

far as to prevent the patient from sleeping. By its duration in this way great debility is produced, and accompanied with frequency of the pulse, and other febrile symptoms; at which time it either proves fatal by its violence, or ceases spontaneously.

For the removal of this disease, opium in large doses, musk, castor, asafoetida, camphor, ether, and other antispasmodics have usually been employed without effect; so that, indeed, we are hitherto unacquainted with any remedy that will prove effectual; the spontaneous cessation, therefore, of the fit is more to be trusted to than assistance from medicine.

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### CONVULSION-FITS.

Convulsion-fits often constitute the last scene of acute or chronic disorders. When this is the case, there can remain but small hopes of the patient's recovery after expiring in a fit. But when a person who appears to be in perfect health is suddenly seized with a convulsion-fit, and seems to expire, some attempts ought always to be made to restore him to life. Infants are most liable to convulsions, and are often carried off very suddenly by one or more fits about the time of teething. There are many well-authenticated accounts of infants having been restored to life, after they had to all appearance expired in convulsions; but we shall only mention the following instance mentioned by Dr. Johnson, in his pamphlet *On the Practicability of recovering Persons visibly dead*.

In the Parish of *St. Clements*, in *Colchester*, a child of six months old, lying upon its mother's lap, having had the breast, was seized with a strong convulsion-fit, which lasted so long, and ended with so total a privation of motion in the body, lungs and pulse, that it was deemed absolutely dead. It was accordingly stripped, laid out, the passing bell ordered to be tolled, and a cof-



fin to be made; but a neighboring gentlewoman, who used to admire the child, hearing of its sudden death, hastened to the house, and upon examining the child, found it not cold, its joints limber, and fancied that a glass that she held to its mouth and nose was a little damped with the breath; upon which she took the child in her lap, sat down before the fire, rubbed it, and kept it in gentle agitation. In a quarter of an hour she felt the heart begin to beat faintly; she then put a little of the mother's milk into its mouth, continued to rub its palms and soles, found the child begin to move, and the milk was swallowed; and in another quarter of an hour she had the satisfaction of restoring to its disconsolate mother the babe quite recovered, eager to lay hold of the breast, and able to suck again. The child throve, had no more fits, is grown up, and at present alive.

These means, which are certainly in the power of every person, were sufficient to restore to life an infant to all appearance dead, and who, in all probability, but for the use of these simple endeavors, would have remained so. There are, however, many other things which might be done in case the above should not succeed; as rubbing the body with strong spirits, covering it with warm ashes or salt, blowing air into the lungs, throwing up warm stimulating clysters or the smoke of tobacco into the intestines, and the like.

When children are dead-born, or expire soon after the birth, the same means ought to be used for their recovery, as if they had expired in circumstances similar to those mentioned above.

These directions may likewise be extended to adults, attention being always paid to the age and other circumstances of the patient.

The foregoing cases and observations afford sufficient proof of the success which may attend the endeavors of persons totally ignorant of medicine, in assisting those who are suddenly deprived of life by an accident or disease. Many facts of a similar nature might be adduced, were it necessary; but these, it is hoped, will be sufficient to call up the attention of the public, and to excite the humane and benevolent to ex-



ert their utmost endeavors for the preservation of their fellow men.

*The Society for the Recovery of Drowned Persons*, instituted at Amsterdam in the year 1767, had the satisfaction to find that no fewer than 150 persons, in the space of four years, had been saved by the means pointed out by them, many of whom owed their preservation to peasants and people of no medical knowledge. But the means used with so much efficacy in recovering drowned persons are, with equal success, applicable to a number of cases where the powers of life seem in reality to be only suspended, and to remain capable of renewing all their functions, on being put into motion again. It is shocking to reflect, that for want of this consideration, many persons have been committed to the grave in whom the principles of life might have been revived.

The cases wherein such endeavors are most likely to be attended with success are all those called sudden deaths from an invisible cause, as apoplexies, hysterics, faintings, and many other disorders wherein persons in a moment sink down and expire. The various casualties in which they may be tried are, suffocations from the sulphureous damps of mines, coal-pits; the unwholesome air of long-unopened wells or caverns; the noxious vapors arising from fermenting liquors; the steams of burning charcoal; sulphureous mineral acids; arsenical effluvia, &c.

The various accidents of drowning, strangling, and apparent deaths, by blows, falls, hunger, cold, &c., likewise furnish opportunities of trying such endeavors.—Those, perhaps, who, to appearance, are killed by lightning, or by any violent agitation of the passions, as fear, joy, or surprise, might also be frequently recovered by the use of proper means.

The means to be used for the recovery of persons suddenly deprived of life are nearly the same in all cases; they are practicable by every one who happens to be present at the accident, and require no great expense, and less skill. The great aim is to restore the warmth and vital motions. This may in general be at-

tempted by means of heat, friction, bleeding, blowing air into the lungs, administering clysters, and generous cordials. These must be varied according to circumstances. Common sense, and the situation of the patient, will suggest the proper manner of conducting them. Above all, we would recommend *perseverance*. People ought never to despair on account of discouraging circumstances, nor to leave off their endeavors as long as there is the least hope of success. Where much good and no hurt can be done, no one ought to grudge his labor.

# MANAGEMENT

## OF THE

### DISEASES OF WOMEN.

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When we consider the important relations in which woman stands to man in every department of life; when we consider, that in one relation, she is the wife of his own bosom, the chosen companion of his heart, the voluntary sharer of his prosperity and misfortunes, the mother of that offspring, in whose life and prosperity, man even in the decline of life, and the decay of health, lives over again the youthful vigor and tender passions of his early years;—when we consider that in other relations, a sincere lover of his virtues, and the admirer of his heroic and noble achievements, she urges man to perseverance in the performance of his moral duties, and to those sentiments of patriotism which gave rise to the ancient republics, their statesmen and heroes—to Ireland her Emmets, to England her Sidneys, and to America her Washingtons—and when we consider, that in another and important relation, the minute and apparently ignoble cares of a family, devolve on her, where there are no witnesses to support her under endless sufferings and trials, and where no civic crowns or public honors await her victories over domestic miseries, and ignoble sufferings and misfortunes, we cannot but be astonished at the fortitude, the courage, the devotedness, the fidelity to her duties, and the heroic virtues of woman! Place man in her situation, and compel him to perform the duties of woman, and he would soon either degenerate into a savage, or sink into perfect insignificance. Placed

in the limited sphere of the employments of woman, man would soon feel himself an obscure and lonely slave—doomed, like her, to a life of obscurity and domestic cares, where the anticipation of no honors would await the performance of his duties, his boasted magnanimity and fortitude would expire like meteors of night, and leave him a monument of powerless and fallen ambition! And how soon would his boasted philanthropy and love of mankind expire, were there no historian to record his deeds of benevolence and patriotism, and transmit them to future ages; and especially were there no honors to be gathered but such as grew on the brows of obscure and suffering humanity, and such as would fade in the grasp and be remembered no more!

Woman! when we reflect on thy blameless life, thy artless tenderness, thy pious simplicity, thy confiding love, and the meek and lowly resignation of thy heart and feelings, under the pressure of miseries and misfortunes of almost every possible character, it seems difficult for the most humane of mankind duly to appreciate either thy sufferings or thy worth! But, when to these considerations are added the multiplicity of diseases entailed on thee by nature and sexuality, as well as by the ignorance of the midwives of this country, thy lot and condition of present existence, seems hard indeed! Most of the midwives of this country, and indeed of most other countries, are those who take up the employment from too great laziness to exert themselves in other walks of life; from utter ignorance of the great responsibilities attached to such a calling, and from a heartless destitution of feeling and humanity, which permits their ignorance and officiousness, to entail diseases originating in mismanagement, on thousands of women for life. These people are always seen wishing to officiate in something which had better be let alone; in fact, if I must speak in plain terms, in attempting to force nature into premature and exhausting exertions, who, if let alone so far as not to be retarded in her operations, would finish her own work without injury to the sufferer. I do not mention this to cast censure on



all midwives; I am acquainted with several of excellent qualifications, who are kind, feeling and experienced, and who possess the excellent good sense, never to hazard or exceed the due bounds of prudence; and who in all cases where there is lingering and difficulty, always so far distrust their own judgment, as to require the aid of a skilful physician. Women should never dread the time of child-birth, but always reflect on the innumerable millions of cases, in which women have passed safely through the trial, for one perhaps which has been unfortunate. When a physician is called in, which in many cases is absolutely essential to the preservation of life, and the safety of the child, his whole solicitude should concentrate in feelings and sentiments of humanity; in such cases, therefore, no woman, however delicate, or even fastidious in her feelings or sentiments, ought to feel any hesitation in permitting the assistance of a physician;—life is always to be preserved, and the safety of human beings ensured, by much greater sacrifices than those which appertain to feelings of mere bashfulness, or even sentiments of modesty. When I speak of calling in a physician, with permission to render the essential assistance to nature in child-birth, I mean a man of delicacy of sentiment and feeling, tried and well known discretion, and defined elevation of character; I do not mean a beardless boy, who has dozed over a medical book for a year, or even two, without understanding its contents, and who is as proud of the name of Doctor, as is a child of a pair of new morocco shoes—such a physician would be worse than an ignorant and officious midwife, who always wishes to be doing something, right or wrong. When young in my profession, I always thought it necessary to be giving some little articles in all cases; in other words, something that would do neither good nor harm;—this kind of conduct will do well enough, so far as it has a tendency to keep up and animate the spirits of the patient, but here it ought to stop. My good old preceptor or master, who had for more than forty years officiated successfully as a man midwife, gave me the following advice, which I recommend most sincerely to

the attention of all my readers — “neither hurry nor retard nature ; give her time to perform her own operations, and when she fails, assist her.”

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### ORGANS OF GENERATION.

I would omit the description of these parts altogether, were not a slight delineation of them essential to understanding the medical doctrines and diseases relating to them. The front exhibits what is called the *mons veneris*, which is modestly shielded by nature, as if she aimed at the concealment of these parts, intended for the procreation of the human species. The *labia*, as they are called, extend downward on each side of what is called the *cleft* ; they unite, and form a thin skin or membrane called the *perenium*, which divides these parts from the fundament.

On opening the labia, you will observe a small part, which appears more full, and raises higher than the rest ; this by physicians is called the *clitoris*, and is the chief seat of pleasurable sensation in sexual intercourse. It may as well be remarked here as any where else, that cleanliness, by frequently bathing these parts with soap and water, has a powerful tendency to remove or quell those venereal desires, which frequently arise from irritability of the parts, and lay the foundation of many diseases for life ; read, in addition to these remarks, under the head of warm or tepid bath, immediately under the clitoris, you will find on close examination, a small orifice or hole ; this is the end of the canal which leads to the bladder, and it is through this orifice or hole that the urine or water passes off. My object in explaining these parts so plainly, is to enable any woman of common sense, by the use of the catheter, to draw off her urine or water herself, whenever it may be necessary, instead of being exposed to a physician on every trifling occasion. For a description of the catheter, and the use of it, see the head catheter.

Immediately under the part out of which the urine passes, is the mouth or entrance into the birth-place, called by physicians the *vagina*, at the further end of which is situated the womb, at the distance of three or four inches. The mouth of the vagina, or entrance of the birth-place, is usually, but not always, defended by a thin tough membrane resembling a fish scale, called the *hymen*; which was once supposed to be the test of virginity, which is always destroyed on a first connexion with a male. Some females have this membrane so strongly formed by nature, as to prevent their menses or courses from flowing; when this is the case, they collect in the womb in such a manner as to resemble pregnancy. I have seen several cases of the kind; and I recollect one particular instance, in which a lady of great respectability had to undergo an operation, before her husband could have sexual intercourse with her. When the menses do not flow at the usual period, and proper means have been used to bring them on, it is always proper for the female parent to examine particularly into this matter, or the consequences of neglect may be fatal. The method of relief, when the hymen is imperforated, or in other words, has no hole in it through which the menses may flow, is simply to puncture open the hymen with a lancet, or any other instrument that will answer. In some females this hymen does not exist: but this is no evidence of the want of virginity, for the membrane is often destroyed by jumping, romping, running, &c., at an early period of life.

About the age that females usually marry, the vagina or entrance of the birth-place, is from two to three inches in length, and capable of some distention. At the upper end of the birth-place or vagina, is the mouth of the womb, which can be felt with the finger. Midwives should be particular in becoming acquainted with these parts, and particularly with the mouth of the womb, because it is from the peculiarities of its feeling, that we become confident of the presence of actual labor. Labor means nothing more nor less, than the efforts of the womb itself, to expel the child, at the period fixed by nature for its entrance into life. Labor is considered



natural if the head of the child presents itself fairly. If the time of labor is longer than twenty-four hours, it may be called a lingering or difficult labor. If any parts of the child, other than the head, presents itself, the labor is called preternatural; and every other case requiring assistance, is called complex.

The bones necessary to be described, are those which form, or appertain to, the pelvis or basin. The pelvis resembles in form, a wash basin with the bottom out. In women, it is very shallow and very wide, and it is by these marks, that the skeleton of the female can be distinguished from that of the male: in women the bones of the pelvis are very slender, and the opening at the bottom so very wide as easily to permit the child to pass. In some instances, this opening suddenly becomes so wide, that the head of the child presses with violence on the soft and fleshy parts, and tears the perenium, which is the membrane between the birth-place and the fundament. This pelvis or basin, formed by four bones; the *os sacrum* behind, the *ossa innominata* on either side, and the *os cocygis* below—the vulgar sometimes call this the *crupper bone*. This last bone is so formed as to move back when the woman is in labor; and frequently makes a grating noise in women who have been married late in life. I have now explained to you the external parts, and also the hard or bony parts, which it will be well for you to remember.

The bladder is very near to the front bones; so near indeed, that for want of an instrument called a catheter, when in the country, I have frequently drawn water off by a common goose quill. The womb lies next to the bladder; in shape it resembles a pear, is of an oblong form like a pear, and in its natural position has the largest end turned upward toward the stomach, and the vagina neck downward towards the external parts. The womb is supported by small membranes or little strings, interwoven together and to the sides of the pelvis or basin, which I have already described to you: it is so commodiously and admirably arranged, as to float about considerably. On each side of the womb, and coming out from its sides, are two fleshy tubes, which are called



the Fallopian tubes, from the name of a physician who discovered them in 1547. These tubes are about 3 inches in length, and the ends look as if they had been cut off with a dull knife. On each side of the pelvis or basin, is found a lump about the size of the end of the thumb: these are the female testicles, which supply the seed at the time the female conceives the child. These ovaria or testicles, have small cells in them, which burst like small blisters, in the act which gets a woman with child. The tubes which I have mentioned are constantly floating about, and the moment the seed of the male comes in contact or touch with them, it stimulates them to take up the contents of one or two of the small cells I have mentioned; and to convey their contents through the tubes of the womb, by what is called by medical men *peristaltic motion*. The seed being now deposited, the child commences its formation and growth; this commencement of growth takes place, as is supposed, about three weeks after the sexual commerce has taken place; because about that time the ovaria or egg passes through the Fallopian tube into the womb. About the fourth month, the woman feels a peculiar sensation about the womb; this is called *quickening*; and is caused by the womb suddenly rising above the brim of the pelvis or basin, and is suddenly pressing on the inside of the belly. The womb is much thicker at the sides than any where else; it is a hollow fibrous mass, which means that it is composed of fibres or threads, interwoven with each other. It has the power of contracting or drawing up, and of expelling its contents, whatever they may be. These fibres secrete and hold the discharge called the *menses* or *courses*. I have now given you a full and plain description of the female organs of generation; of what is believed to be the manner of conceiving; of the formation of the womb; and of the different presentations of labor; and I have been thus particular, in order that you may the better understand the information I have to communicate on the diseases of women.

## MENSES OR COURSES.

THE early or late discharge of the menses or courses depends very much on the climate; the constitution of the woman as to strength or weakness; on the emotions or passions of the mind, or in plain terms on the lasciviousness or chastity of her venereal desires. In all cold climates, this discharge is later in making its appearance than in warm ones. Fruit ripens sooner in warm latitudes than in cold ones, and it is the same with females. In the genial climate of Italy, girls have their courses at nine years old, but in the colder regions of Russia, this discharge does not come on until women are from twenty to twenty-five years of age, and then not unfrequently in very small quantities. In all warm climates, says a distinguished writer, women exhibit all the splendor of their charms, when they are mere children in understanding; but when their minds have arrived at maturity, they cease to be objects of love.

In the western country, although the climate is mild, it is much subject to sudden changes, particularly in East Tennessee. These changes produce powerful effects on the health of women, and also on their constitutions.—The western country is damp and wet during the winter season, in consequence of which, women, from being exposed to wet feet, are subject to more irregularities in this discharge, called the menses or courses, than in any other part of the United States. When the usual period for this discharge comes on, a little attention on the part of the parent will be sufficient to discover the symptoms. Many girls have their discharges without inconvenience; while others suffer considerably when the period is about to come on, such as a great restlessness, slight fever, head-ache, heavy dull pain in the small of the back and bottom of the belly, swelled and hardened breasts, and so on. The appetite becomes delicate, the limbs tremble and feel weak, the face becomes pale, and there is a peculiar dark streak or shade under the eyes. When these symptoms and

feelings occur, every thing should be done to assist nature in bringing forward this discharge. This is a critical period of life, and much depends on the result. The greatest possible precautions should be used to prevent the girl from taking cold at this time, because by very slight exposures, nature may be prevented from performing this very important office, by the failure of which, some of the most fatal female diseases are produced. Exercise should be taken on horseback at this time, or indeed any exercise that will give free circulation to the blood; the emotions and passions of the mind ought also to be particularly attended to; a cheerful disposition should be produced and kept up, at the same time that every effort should be made to banish grief, despondency, or any of the depressing passions, which I need not tell you have a powerful effect in preventing the due discharge of the menses or courses. The discharges, in their first appearance, are in small quantities, and rather irregular as to me, but they gradually, in healthy women, become regular, and flow monthly. While in a state of pregnancy, or when suckling children, women do not have these menses or courses, nor do they ever become pregnant, or in plain terms, get with child, until this menstrual discharge makes its appearance on them. Women also cease to breed when this menstrual discharge leaves them, in advanced life. The period when this discharge commences on women, and the period when it leaves them, are critical and dangerous periods of time to the health and constitutions of women. As I shall describe the remedies more fully, in cases where the menses have been established, and have suddenly stopped from cold or other causes, I shall merely remark here, that in all cases where the first symptoms of menses make their appearance in young girls, they should use mild and gentle methods of courting nature to the performance of her office, by sitting over the steam of warm herbs, bathing their feet and legs at the same time in water, as high as the knee, or what is preferable, use the warm or tepid bath—*see that head*—and drink freely of warm pennyroyal tea. These remedies should be used a short time before go-



ing to bed, so that a gentle moisture or sweat may be produced on the skin, which generally causes the menses or courses to flow. This discharge is usually at first very small, but by attending to this simple course, which I have laid down, when the proper or expected time has arrived for their appearance, nature will gradually become regular, and the menses or courses be produced. The quantity, as I have observed, will at first be quite small, perhaps just sufficient to stain the linen or shift, which will increase in quantity at every period or monthly return. As this discharge depends very much on climate, constitution, manner of living, and exercise, you will easily account for its differing in quantity, not only in different women, but even in the same woman, increasing or diminishing to the state of the system.

In all southern or warm climates, the quantity discharged is from eighteen to twenty ounces; but, in colder climates, it diminishes accordingly, even to one or two ounces. The menses or courses remain on, and the time of their monthly return, differ very much in women; in some it will remain but a few hours or a day—in others, from two to four days, and I have even known it to remain ten days. The common or usual time, however, is from three to six days. In the western country, the menses generally cease at about the forty-fifth year: this, however, depends very much on the period they make their appearance—if at an early age, they go off earlier, and if at a later period, they sometimes continue to fifty years. About the expected time that the menses or courses should flow, which will be easily known from the descriptions I have given you of the symptoms, you are to avoid every thing that may injure the digestive powers, and particularly costiveness or being bound in the bowels, loss of sleep, exposure of any kind, such as damp feet, or sudden changes from warm to thin clothing. Girls in the country should be prevented, about this time, from wading in the water, or walking bare-foot through the dew, as it often stops this discharge. Getting cold, from any imprudence or unnecessary exposure, must also be avoided. On the subject of medicines, you are particularly requested, as you



value the health of your child, to give no strong medicines in the first stage of the menstrual discharge, called vulgarly *forcing* medicines. This indeed is a proper name, for you are truly forcing nature, which is contrary to every principle of common sense; for this discharge, unless stopped from some one of the causes I have mentioned, will assuredly yield to patience and simple remedies; after a full trial, and sufficient time allowed, and you are disappointed in bringing them on, you will try cautiously and mildly, the various remedies under the following head—"obstruction of the menses," where you will find the valuable remedy "seneka snake-root," for a full description of which important root, in the stoppage of the menses or courses, read under the head "seneka snake-root."

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## OBSTRUCTED MENSES.

When the menses or courses have been once regular, and have been stopped from any accidental cause, such as cold and so on, they are said to be obstructed. This is sometimes attended with pain; when this is the case, it is called obstructed or painful menstruation, and is attended with greater or less misery, according to the state of the system at the time this obstruction takes place, and more particularly, if any other part of the body is laboring under disease; for the womb from whence the menses or courses flow, is subject to great varieties of diseased action, and it is utterly impossible for me to describe the close sympathy and connexion, which is immediately and sensibly felt, between the womb, the stomach, the head, and the influence or power it has on the pulse. In six cases out of ten, where hysterics, despondency of mind, sickness at the stomach, pains in the head, coldness of the hands and feet, flushings of heat over the whole body, and not unfrequently fever, arise from obstructed menses or courses, or some other disordered state of the womb.—

I have had, in my practice, many females who became greatly alarmed from the spitting of blood. This is frequently the case, where the obstruction has been for any length of time, accompanied with frequent bleeding at the nose, dry short cough, pains in the bottom of the belly, and in the small of the back, pulse hard and quick, skin hot, and burning sensations in the palms of the hands and feet. When these last symptoms take place, immediate attention should be paid, or consumption will take place. A skilful physician must be sought for, if the remedies, after a fair and steady trial, should not produce the discharge. In some instances this obstruction of the menses or courses, arises from debility or weakness of the constitution. This will be known by the whites making their appearance. When this is the case you must not force nature, but give tonic or strengthening medicines to restore the system first; then the remedies that follow, beginning with those that are most simple, until the menses or courses are produced.

*Treatment.*—If the woman is of a robust or full habit of body, the loss of some blood from the foot will be proper. A short time before the return of the menses or courses, warm cloths wrung out of hot water must be applied to the bottom of the belly; this is to be done a few nights before the expected time, or you may sit over the steam of common pine tops, on which boiling water has been poured; or you may sit in a tub of warm water for fifteen or twenty minutes before you go to bed, and while sitting in the warm water, have your feet bathed in another tub or vessel, in which the water should be as warm as you can conveniently bear it, or plunge your feet and legs in and out frequently as you may be able to bear the heat of the water. While you are bathing or steaming over the pine tops, use the following remedy, which must be prepared and kept ready for use when you are going to bathe—one ounce of seneka snake-root is to be bruised with a hammer, then put it into a quart of boiling water, and stew it over a slow fire to half a pint; of this tea, take a tablespoonful every

ten minutes while bathing or while over the steam—for a full description of this valuable root, see that head.—When you have used these remedies for a quarter or half an hour, retire to bed, and have the bottom of your belly well rubbed with a coarse warm towel, or a soft brush; this is called friction, the intention of which is to rouse the circulation, excite the womb to action, and cause the menses or courses to discharge or flow. You will find the following medicine, to be a valuable assistant in producing the discharge, and it should be taken for one, two, and even three nights before the expected time:—five grains of aloes, five grains of rhubarb, and five grains of calomel, must be finely powdered and mixed together well, and should the dose not produce a stool or two by morning, you are to take a small dose of epsom salts to assist the operation. If the dose should purge you too severely, the next dose should be less, say three grains of each will answer; your own judgment will easily regulate the dose to the constitution of the person. Or you may apply a small blister a day or two before the time, between the fundament and birth place, called by physicians the perineum, giving at the same time, a purgative twice or even three times a day of aloes, each dose five grains. Should these remedies all fail, inject or throw up with a syringe or squirt, into the vagina, a mixture of strong whiskey and water, so as to irritate or excite an action in the womb. As I have remarked in the first instance the loss of some blood will generally be found beneficial, unless the constitution or health of the woman will not admit of the loss of blood, which is not very frequently the case.—The loss of blood always tends to assist the womb to return to its natural action. Madder, which is known to every person in the country as a dye, and may be purchased at any of the stores, is highly recommended by the late Doctor Barton of Philadelphia, late professor of the medical school in that city, in doses of twenty or thirty grains. The tincture of gum guaiacum in doses of a tablespoonful in a cup of new milk may be given. This tincture is made in the following manner:—obtain one ounce of gum guaiacum, which is worth about nine

pence; mash or pound it fine with a hammer, and put it in a pint of spirits of any kind; let it steep for ten days, shaking daily, and you have the tincture of gum guaiacum, it being then fit for use. Doctor Dewees, professor of midwifery in the medical school of Philadelphia, asserts that in the experience of thirty-two years it has never failed him in producing the menses or courses. Of this spirit, put a tablespoonful in the milk, and gently pour off the spirit, so as not to shake it at the time you are to use it. I have now given you the different and important remedies, out of which you may select which you please for use, they are all valuable. You will however bear in mind, that the efforts to be made to bring on the menses or courses, should take place about the expected time, or a little time before it.

The constitution of the woman must be fully and properly examined, so as not to force, but to assist nature in her operations.

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### GREEN SICKNESS.

When the menses or courses have been retained or stopped for any length of time, and the whole system becomes diseased for want of this discharge, so necessary to the health of every female, it terminates or ends frequently in what is called *cholorosis*, or green sickness. When this is the case, the skin turns of a pale yellow or greenish hue; the lips become pale or of a purple color; the eyes have a dark or purple tinge around them; on making the least exertion, the heart palpitates or beats; the knees tremble, and there is a sighing without knowing the cause. The mind is very fickle, and the woman dislikes, or seems to want the power to attend to her domestic concerns. The cheeks are frequently flushed similar to consumption; the feet swell, and the whole system seems to sink under debility or great weakness. I have now described to you



the symptoms which I alluded to, when I directed you to examine the constitution, and not to force nature, especially when tonic or strengthening medicines are required to restore the whole system, before any attempt ought to be made to bring on the menses or courses.—The treatment, in this last stage called green sickness, should be as follows:

As little medicine as possible should be given; in fact, nothing but some simple medicine, such as will prevent costiveness by keeping the bowels open, such for instance as a teaspoonful of epsom salts, and a teaspoonful of magnesia, ground finely and well mixed together, to be taken in a cupful of cold water when necessary for this purpose; travelling on horse-back, or moderate exercise. Good Maderia wine, taken frequently and in small quantities; bitters, made of equal quantities of wild cherry-tree bark and poplar bark usually called swamp poplar—steeped in wine for several days, and taken in moderate doses; or tea made of the flowers of garden camomile, and taken cold, in a dose of a wine-glassful, three or four times a day. The chalybeate water should be used very freely. The western country abounds with these waters: for they are to be found on almost every branch or creek. Chalybeate waters, are those springs which are impregnated with iron. By these remedies, the whole system will be restored, and in due time the menses or courses will again appear; at which time, mild and gentle remedies are to be used, to court nature to the proper performance of this necessary and important discharge.

However, it is not always that these Chalybeate waters can be had, and a most excellent medicine may be obtained at the shops, viz: twenty-five grains of carbonate of iron, or rust of iron, and six grains of sulphate of iron or what is called copperas, Gum Arabic sufficient to make them into twelve pills, let the young lady take one of these twice or thrice a day, and also some good bitters three times a day.

## THE GREAT DISCHARGE OF THE MENSES OR COURSES.

When the menses or courses come on suddenly or irregularly, and the discharges for several days are greater than usual, by which the woman is greatly reduced and weakened—this is called excessive menstruation. The causes are, too great a determination of blood to the womb; or in other words, too great an action in its vessels. This over quantity, or large discharge, generally takes place in delicate women, particularly those who take but little exercise, or those who sit a great deal; such as milliners or seamstresses, and in fact all who lead sedentary lives, and are addicted to such unhealthy habits.

*Treatment.*—Draw blood from the arm immediately; and regulate the quantity taken, by the constitution, the habits, and the strength of the woman: there are a few cases that do not admit of a little blood being drawn.—Give a purge of epsom salts or castor oil, and let your patient go to bed and there remain; she must be kept as cool as possible, with her hips a little raised. The room also must be made and kept as cool as possible. If the discharge of blood is considerable, apply cloths wet with cold water to the birth-place, and even push them up it; at the same time injecting cold water up with a female syringe or pewter squirt. There is no danger whatever in these cold applications; therefore do not hesitate to use them if necessary. I have always used ice in my practice in Virginia, by putting it in a towel or piece of flannel, and applying it to the belly. If the blood flows rapidly, make a plug with cloth, and push it well up the birth-place, so as to prevent the blood from flowing, or that it may congeal and stop. Should these remedies fail, you must resort to the following remedy.

Dip a towel in cold water and vinegar, and slap the

small of the back a few times, and then stop; give a bolus or large pill made with three grains of Kino, and three grains of alum mixed with the conserve of roses, every two hours, continue to slap the back suddenly with the cold towel, say every half hour.

In some extraordinary cases, what is called stuffing the vagina, is proper, that is, introducing soft rags or a silk handkerchief into the vagina, to stop the bleeding, but in common cases, I have seldom failed to relieve the patient, by the astringent Bolus, and the cold towel suddenly applied to the back.

If there is great pain in the womb, administer a clyster—look under that head. The clyster must be made of the bark of slippery elm, by pouring boiling water on the inside part of the bark. It is to be perfectly cold, and in it put a tea-spoonful of laudanum. Throw this clyster up the fundament, out of which passes the stool. These clysters are to be given every hour, until relief is obtained. Every thing used at this time as a drink, should be perfectly cold. Nothing heating, of any description, ought to be given, either as food or drink, during this great flow of the menses or courses.

To prevent the return of this discharge, when once relieved, take moderate exercise; bathe the back and belly frequently in cold water, and take the salt bath—see under the head cold bath. Take, moderately, the best old Madeira wine; and a short time before the expected discharge lose some blood from the arm. At all times, you are to pay particular attention to your bowels—that is, not to permit them to become costive or bound. Morning and night, when you rise, or retire to bed, use friction—which means rubbing the whole body, for twenty or thirty minutes, with a brush or coarse towel--this should be done by a servant or assistant. This last remedy is truly worthy of strict attention.

## CESSATION OF THE MENSES OR COUSES.

A cessation of the menses or courses, means an entire stoppage of these discharges, or a change of nature in this respect, at an advanced period of life. This revolution or change takes place, generally, from the forty-second to the forty-seventh year: it is a critical and extremely dangerous period of a woman's life, and although thousands pass through it without experiencing any great inconvenience, it is a period which requires particular attention and care.

All exposures to cold and damp must be scrupulously avoided; and particularly wet feet, and remaining any length of time on the damp ground. Sudden changes of dress are also extremely hazardous at this period; in fact, every thing that produces sudden revolutions in the bodily system, from extremes of heat, cold, and dampness. By not attending to what I have just laid down, you will be sure to lay the foundation of diseases of a multiplied and stubborn character, which will be sure to embitter and distress the remainder of your life, be it long or short.

The courses, about this time of life, begin to lessen in quantity, and to become more or less irregular in their discharges. When you are likely to suffer some inconvenience in this change of nature, you will have warning by the occurrence of the following symptoms:

You will have pains in the head and small of the back, trembling of the knees, flushing and burning of the face, choking sensations in the throat, sickness of the stomach, dizziness or swimming in the head, and frequently mists before your eyes. You must now live on spare diet, and, as I have just told you, avoid all kinds of cold, damp, and wet.

*Treatment.*—Very few medicines are to be taken in this state of the system, and those that are taken must be of the most simple, mild, and innocent kind. For



the purpose of keeping your bowels open, and removing all causes of irritation, use purges of epsom salts, or castor oil when necessary; they will always cool the system, and allay any irritations. If you are of a robust and full habit of body, and have dizziness and pains in the head, cupping on the temples, so as to draw some blood, will give relief. For the method of cupping, which is very simple, look under that head. Or, if you should not like the plan of cupping, or if it be inconvenient, you may occasionally draw a little blood from the arm; when those unpleasant feelings I have described make their appearance. Temperance, or, in other words, abstaining from strong food, and living on very spare and simple diet, is greatly more important than any medicines that can be taken—nor will any medicines be necessary in most cases, other than such as will keep the bowels in a gently laxative state, as mentioned before, with cupping if considered necessary. You should take moderate exercise in good weather on horseback, and above all other remedies, use regularly friction; which means rubbing the whole body, twice a day, with a brush or coarse towel—morning and evening. This friction you are not to neglect, because it is very important at this period. You are, also, to keep the birth-place perfectly clean, by washing daily those parts in milk-warm water and soap. Unless these parts are kept perfectly clean, they retain a secretion which I need not name—which irritates and excites diseased action in the womb. Whenever you feel pain in your back, belly, &c., &c., take the warm or tepid bath, which you are to make sufficiently warm to be pleasant. For a description of this bath, see that head. If pain is felt in the head, stomach, or breast, a blister must be applied between the shoulders, which will give relief. You may take off the blister, after it has been on two or three hours, if the pain has been removed by its application, as is sometimes the case after the skin has become red from the blister. But the warm bath, moderate bleeding, and keeping the bowels open with the mild medicines I have described, will afford you the necessary ease

and relief in your situation, provided you keep yourself in a perfect state of rest, on your bed.

If the pain in the womb be considerable, and you have any fears of an inflammation in those parts, apply a large blister over the belly—which blister is to be dressed with sweet oil. You are, also, to give clysters frequently, which are to be thrown well up the bowels, say, three or four times a day. They are to be made of slippery elm bark, by pouring boiling water on the inside bark, and letting the water stand until about milk warm; this water is to be thrown up, as directed under the head clystering. If the inflammation is great in the womb, throw up the birth-place, with the clyster pipe, the slippery elm water, five or six times a day; but remember it is to be perfectly cold, when you throw it up the birth-place: when thrown up the fundament into the bowels, it is to be milk warm. There is an excellent preparation, which can easily be made, to throw up the birth place—which is perhaps better than the slippery elm water. Take two tea-spoonsful of sugar of lead, and put them in a quart of the coldest water. After the lead is dissolved it will be fit for use. Of this lead water, throw up about a gill, mixed with about a gill of slippery elm water. Do this occasionally.

Should an ulcer or sore break out on the legs, or any part of your body, be very careful not to heal it up immediately or very suddenly; it is an effort of nature to relieve herself of the discharge. It may be necessary for me to remark, that if the womb is painful, and there is no danger of inflammation, apply over the belly and to the small of the back, warm herbs, or warm salt, or bladders filled with warm water, and take a dose of laudanum or opium—see table of doses. By attending closely to these instructions, which I have laid down plainly, you will pass through this change of nature with safety, and no doubt enjoy, through the winter of old age, an exemption from those complaints which are too apt to occur, from neglect of this important change of the female constitution.

## THE WHITES.

This disease is called by physicians *fluor albus*. It is an unnatural and white colored discharge from the birth-place, and is produced from various causes: such, for instance, as the powers of the womb being impaired, by severe labor, repeated miscarriages, getting out of bed too soon after child-birth, or by taking cold at this time, or any other time when the menses or courses are about coming on; or, by over fatigue or weakness, produced by general bad health; or where the general secretions and excretions have been deranged by disease; as the womb always more or less sympathizes with the whole system. Women who are of weakly or delicate constitutions, and take but little exercise, and such as have had many children, are much subject to the *fluor albus* or whites. I have known many instances, in which the whites made their appearance monthly, instead of the natural menses or courses. This is generally the case where the woman is laboring under the suppression of the menstrual discharge, or some weakness or derangement of the whole system. I shall now describe the means of knowing the whites from the clap.

In the clap there is a swelling of the parts, an itching, an uneasy feeling, and much heat in making water. In a little time, both the inside and outside of the parts become inflamed, and give much heat and scalding in evacuating the urine; if these symptoms occur, you may be tolerably certain you have taken the clap, in which case you will find the means of relief distinctly laid down.

The whites are called by this name, because the discharge resembles the white of an egg, or the mucus or slime which runs from the nose when you have a cold. There are three or four stages of this complaint between its mildest and its severest form; and if permitted to run on, it will entirely destroy the constitution of the woman, by reducing her flesh and muscular strength. Her complexion will change to a sickly pale color; she

will become very weak, and her heart will palpitate or beat with the slightest personal exertion. As this disorder seldom stops without medical assistance, means ought always to be immediately used, or it will commit great ravages on the female constitution. The whites come on very irregularly, sometimes the discharge is in lumps, but more frequently it is of a white, slimy, ropy consistence. If the disease is of the mildest form, the discharges resemble the white of an egg, having no smell, and no color but that just mentioned. In the second stage, the discharges are of a light yellow or straw color, and something offensive to the smell. In the third stage, the discharges are of a greenish color of a tough and gluey consistence, and quite offensive in smell.

In the worst stage of the disease, or when the disease has been permitted, from ignorance or negligence, to run on, the discharges are very offensive, and mixed with blood; the face becomes of a sickly greenish hue; under the eyes there is an unnatural color; the lips become purple; the feet and legs swell; the face becomes subject to flushes of heat; there is a dry cough and great difficulty of breathing, particularly on the slightest exertion; and unless relief is obtained, the disease will, after this stage, terminate either in consumption or dropsy.

I shall now proceed to describe the effects which the disease produces in the different stages of its advancement. When it is slight, or in its mildest form, and the general health of the woman is not much impaired, there is a pain in the back, the menses are not regular, and on the slightest exertion the woman feels a shooting, and afterwards a heavy pain in the back. In the second stage, the above symptoms are felt most constantly and severely; the stomach becomes disordered; the head aches; the bowels are costive or bound up; there is a dizziness or swimming in the head, and there seems a heavy pain in the bottom of the belly, and at the upper part of the thighs. In the severest form of the disease, the symptoms of which I have already described, all the indications or marks of dyspepsy or indigestion take



place: for a description of which complaint see under that head. The whole system becomes disordered and unhealthy; the menstrual discharges entirely stops; and the woman, from general debility and weakness, sinks rapidly into a decline, and ends either in consumption or dropsy, as I have said before.

*Treatment.*—There is no remedy in the first stage of this complaint equal to scrupulous cleanliness, or bathing well those parts in cold water three or four times a day, and injecting up the birth-place, frequently, the same thing, cold water. Sleep on a mattress instead of a feather bed, or in other words, a hard bed of any kind. Rise early and take proper exercise; and if convenient to a chalybeate spring, or one whose waters are impregnated with iron, drink freely of those waters. The western country abounds with waters of this description; and they are a most valuable remedy for women laboring under this disease, or any irregularity of the menses or courses. The bowels are to be kept open, with mild laxative medicines, such as epsom salts or castor oil. From fifteen to twenty drops of balsam copaiva are to be given on sugar, three times a day; which if necessary are to be continued eight or ten days, or even more, if found essential. I have relieved this complaint, when all the different remedies had been tried, by simply using the turpentine from the common pine tree. It must be made into pills with honey, and one of the pills given two or three times a day, using at the same time, the following injection, which is to be thrown up the birth-place three or four times a day. A teaspoonful of sugar of lead is to be put into a pint of spring water and permitted to remain until dissolved. Obtain at any Doctor's shop, a female syringe, which is a pewter squirt with holes in the end of it. With this instrument you are to throw up the lead water three or four times a day. You will find this a valuable remedy. If it be inconvenient to get the sugar of lead, make a decoction of white oak bark, by boiling it in water—and of this water, when perfectly

cold, throw up the birth-place as often, and about the same quantity that you would of the sugar of lead.

If the discharge is very offensive from the parts, you should introduce up the birth-place every morning and night about a teaspoonful of common charcoal, pounded as fine as possible. This will entirely remove the offensive smell.

If the directions I have given do not restrain the discharge, you will apply a large blister to the small of the back, at the same time using the injections freely as directed. Should the constitution be much injured, and the woman greatly reduced by the discharge, obtain from any Doctor's shop a tincture of *sal martis*, which is a preparation of iron dissolved in muriatic acid. Obtain also a box of soda powders. On these boxes you will find directions how to use them; if not, look under the head "soda powders." When you have mixed your papers of soda powders with water, in two tumblers, and before you have poured them together, drop into the tumbler in which you have put the contents of the blue paper, eight or ten drops of the medicine in the phial. Being now ready, pour it all into one tumbler and drink it down immediately, and while it is foaming or effervescing. This drink should be taken three times a day. I have merely to remark, that this is a preparation of one of the most valuable mineral waters known in Europe, and is admirably adapted to debility of the stomach, or indigestion, affections of the womb, and indeed, debility of any kind. After all these remedies have failed, polypus of the womb may exist, which always requires the assistance of an able physician.

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### PREGNANCY.

When the sexual connexion between a male and female, has been favorable to the increase of our species, the seed of the man and that of the woman are conveyed as already described, through the Fallopian tubes

into the womb, and there deposited. Here the growth of the fœtus or child commences, whilst at the same time there is formed, a bag or covering for the whole, called the membranes, which lines the womb. At the same time, there is a fleshy substance formed, which very much resembles the liver; this substance is called the after-birth, and by physicians the placenta. This fleshy substance, called the after-birth, receives and prepares the blood, which is supplied by the womb for the child. From this after-birth to the navel of the child, there is a small cord or tube called the naval cord, or umbilical cord. This tube admits the circulation of the blood between the mother and the child. There is also a fluid, known by the name of the waters, in which the fœtus or child moves and increases in growth.

You will now readily perceive, that the womb contains, when pregnant, the child, the waters in which it moves, membranes which support it, the navel-cord, and the after-birth. From eight to ten days after the woman has conceived, the first formations of the child may be distinguished; it is, however, so extremely delicate as to require the most minute attention to discover it with the naked eye. The face and form of the large features, are as yet not sufficiently plain to be distinguished; you can merely discover the formation of the head and trunk—the trunk being the longest and most delicate—the whole resembling a bit of jelly of an oblong figure. You will perceive, by close examination, the resemblance of a small feather, which comes from the navel, and ends in the membrane by which the womb is enclosed. This fine feathery fibre, afterwards the naval cord connects the young with the after-birth.

In about three weeks after conception, the formation of the infant may be plainly distinguished, because by this time the head and features of the face begin to assume something of a strong outline; in other words, they begin to show the realities of what they are. The arms and legs are next seen to project from the body; two black specks represent the eyes—and two extremely small holes make the places of the ears. The ribs

on each side are about the size of common threads; and the fingers and toes about the same magnitude. The arms are something longer than the legs, in consequence of the growth being more rapid.

In about one month after conception, the fœtus or child is about one inch in length; and it now takes a bending posture in the middle of the water or liquor I have described to you. About this time the membranes, sometimes called a bag or covering, become enlarged, and get thicker and stronger, and the whole mass together—is about an inch in length, and nearly the shape of an egg.

In about six weeks the motion of the heart of the child may be perceived. In fact, in surgical operations which I have seen performed, where the child was taken from the womb, the heart was seen to beat for a considerable length of time.

In three months, the child is three inches in length and its weight is from two to three ounces. Women assert that they have felt the motion of the child about this time—but I would suppose it doubtful at this early period. In about fourteen weeks, the head of the child is bent forward, and the chin rests on the breast; the knees are lifted up; the legs bent back on the thighs, and both the hands lifted up towards the face.

In the lapse of time, the child acquires more strength, and is constantly changing its posture; but the head most commonly inclines downward. Near the fifth month, the mother can distinctly feel the motion of the child, which is called quickening, and which is often accompanied with sickness at the stomach, and vomiting, particularly in the morning. When this quickening is felt, it is a very certain symptom of pregnancy. About the time of this quickening, the womb seems as if it were loose in the lower part of the belly. As long as the womb is detained in the pelvis or basin, you can, by introducing the finger up the birth-place, the woman being in a standing position, distinctly feel the mouth of the womb, which is lower down than in the natural and unimpregnated state. This is occasioned by the weight of the womb and its contents, continually and



gradually bearing downward. Thus the mouth of the womb can be felt, after the woman has become with child, for several weeks, and affords another evidence of pregnancy.

After this time the womb begins considerably to increase in size, and ascend gradually up into the abdomen or belly, growing at last so large that it remains mostly above the bones of the pelvis or basin, and partially rests on them.

In the beginning of the fifth month, the belly becomes hard, and the navel of the mother is perfectly even and smooth. From this onward the woman increases in size; pregnancy being now evident, a further description of its progress would be unnecessary. In nine months, or in about forty-two weeks from the stoppage of the menses and courses, the child is prepared for its entrance into life; and nature prepares herself for a delivery of her burthen, by a contraction of the fibres of the womb, which are no longer able to bear the irritation. Here commences the pain of labor, in other words, restless and uneasy sensations, pain in the small of the back, frequent desire to make water, accompanied with bearing downwards, particularly at the bottom of the belly; constant desire to go to stool, perhaps without being able to pass any thing; costiveness, with a small discharge of mucus or slime from the birth-place, &c. &c.

I have mentioned to you, the waters in which the child moves, and changes its position. As to the quantity of these waters at the birth of the child, it varies, very much in different women. In some I have seen not more than a gill, in others not more than half a pint, and in others I have known nearly two quarts. Those who have written on this subject before me, state that these waters resemble the white of an egg, and have very little smell. This is, however, not always the case, the waters are sometimes very offensive. The fact is, that their color and consistency depend on the peculiar state of the system.

The after-birth prepares the blood in a proper state, which is then conveyed by the navel cord to the child for its support and growth; you will therefore under-

stand, that the growth is produced by and through the after-birth. This after-birth or fleshy substance, which resembles the liver, is generally in weight from a pound to a pound and a half; and depends both for weight and size, not on the appearance of the woman, but on the healthy or diseased state of the womb and its secretions; for I have very often seen in my practice, very large women produce quite small after-births, whilst on the contrary, I have seen very delicate women produce astonishingly large ones.

The navel cord, called by physicians the umbilical cord, is formed of two veins which come from the after-birth, and an artery which comes from the child; these being twisted nicely together is the reason why it is called the navel cord. The blood which passes through the veins of this cord enters at the navel of the child, and by the proper vessels is conveyed to its heart; it is then conveyed again back from the heart, to the various parts of the child's body, for its growth and support, as I told you before. After returning again, the heart forces it back through the artery, which I have mentioned as a part of the cord to the after-birth, which prepares it for the fœtus or child.

I have now given you a plain explanation of pregnancy, and of the means by which the child is sustained in the womb, and of the parts connected with the womb, necessary to be known and understood. This explanation will enable you, with a little attention, to understand something of the astonishing powers possessed and employed by nature, for the procreation, increase and preservation of the human species.

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### SIGNS OF PREGNANCY.

Sickness in the morning, often attended with vomiting or puking; heart-burn, and soreness on the stomach; loss of appetite, and dislike of the sight of food; craving for things which before you were indifferent to, or even disliked; and stoppage of the menses or courses; this

last symptom, however, is sometimes occasioned from cold, &c. Pregnancy is also known, by palpitations or flutterings of the heart; faintness, accompanied with a desire to vomit; these last symptoms are generally felt by young married women in their first pregnancy. The breasts become more full, the nipples more firm and hard, and the rings around them assume a darker color. The rising of the naval, so as to become flat and smooth with the belly, may be considered an almost certain evidence of pregnancy. I omitted to mention the tooth-ache frequently is an indication of pregnancy.

The pulse of a woman with child is considerably quicker than common; there is also frequently a dizziness or swimming in the head; the complexion of the face generally changes, either by becoming much improved, or by exhibiting a more sallow, pale and sickly color. There are few women, who do not undergo some peculiar change of countenance in pregnancy so as to indicate to those well acquainted with them, their real situation. There is, however, no certain sign of pregnancy, but the motions of the child felt by the mother; and all the symptoms I have mentioned, although sufficient to induce the belief of pregnancy, may be deceptive. For instance, the menses or courses may stop, and it may be produced by cold, or some cause other than pregnancy—therefore, until about the third or fourth month, doubts may exist as to the actual situation of the woman.

I have mentioned, that after conception, and before the womb began to raise above the pelvis or basin, by introducing the finger up the birth place, the mouth of the womb might be plainly felt. This is the fact, and the reasons are obvious. The increasing weight of the womb, at this period, lowers its mouth in the vagina or birth-place, so that it can be easily touched with the finger; and an experienced physician or midwife, by such an examination, could easily tell whether the woman was with child or not. The indications, however, are more plainly felt in a young married woman, than in one who has borne children. In making this examination, the woman should always be in a standing pos-



ture, leaning on the shoulder of the operator, so as to relax the parts as much as possible. In women who have borne children, or suffered injuries from childbirth, the mouth of the womb is very apt to protrude downward through the birth-place, and is called falling down of the womb. This is caused by the ignorance and stupidity of common midwives, from pulling the after birth away, and producing this descent of the mouth of the womb. You will be made fully acquainted with this falling of the womb in the proper place.

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#### CAUTIONS DURING PREGNANCY.

When the woman discovers her change of situation, or in other words, that she is with child, she is to attend to her bowels particularly, so that they may not become costive or bound up. She must steadily bear in mind, that more than half of the diseases which arise during pregnancy, are more or less occasioned by neglect to keep the bowels regular. If you cannot have a stool daily, take a clyster of simple milk and water; there is no indelicacy in this matter. There are instruments called self-pipes, which you can use yourself, and there ought to be one of these in every family. For a description how to prepare and administer clysters, read under that head. I have known many women, who, by neglecting their bowels during pregnancy, were compelled to submit to having the hard excrement removed from the fundament before passage could be obtained. This is certainly more indelicate, than using a clyster pipe, and merely throwing up a clyster of milk and water, and I do not assert, that if these clyster pipes were more used in the United States, both by women and men, there would be many constitutions saved, and very many diseases and sufferings avoided. Is it not reasonable to presume, that more danger is done to the stomach, by eternally keeping it loaded with drastic purgative medicines, than would be done to the system by the simple use of the clyster pipe!



Women, during pregnancy, may be said to labor under constant irritation, however delicate their constitutions; and therefore clysters not only afford an easy and pleasant passage or stool, but cool the bowels, and allay the irritation of the whole system. The tepid bath ought to be used during pregnancy. It will entirely sooth, not only the bodily irritation, but also tranquilize the mind and feelings. You will recollect, that the water of this bath is to be pleasantly warm, because hot water has been known to produce abortion, which means losing the child. The bathing I recommend, will have an effect to preserve and equalize the healthy action of the womb, and all the parts connected with it. Particular attention should be paid to the diet of food, let it be simple and plain, and of such a quality as agrees with you. If you will but attend to these instructions, I may assure you that you will pass through this period, not only with safety but with great comfort, and produce in due time, not only a healthy, but but a vigorous offspring.

By all means, banish gloomy and depressing fears; nor listen for a moment to the idle tales of misfortunes which are said to have happened to others; all these tales are without a shadow of truth. Think of the countless and innumerable millions, who have passed through these feelings and trials without the slightest accident. Therefore, place full and implicit confidence in the benevolence, wisdom and mercy, of that God the Great Father of the Universe, who rules and governs all human destinies! — Be cheerful, collected and serene, for in multiplying and replenishing the earth, you are fulfilling an imperious command of an Almighty power, in which he will never desert you.

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#### DISEASES OF PREGNANCY.

The many diseases to which women are generally liable during pregnancy, mostly arise from the causes I have already enumerated, such as costiveness, improper diet, and so on. The womb at this period is extremely irritable, and always sympathizes with the other parts

of the system, and particularly with the stomach and head. Some women suffer a great deal during pregnancy, and others very slightly. The fact is, that the mind, the passions, and even the feelings of women, sometimes participate strongly with the physical system during pregnancy; not only leaving powerful impressions on the fœtus or child itself, but exercising a strong influence on the very conduct of the woman herself. I hardly need instance such matters as longing for particular articles of food, or the vast and countless variety of whims, caprices, sympathies, antipathies, and so on, which beset some pregnant women; nor need I point out to the reader, the abortive proportions of birth, and the varieties of injury sometimes sustained by the child, through the mind, imagination and feelings of the mother. Pregnancy also, and not unfrequently, exercises a moral influence.

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#### SICKNESS OF THE STOMACH.

This is common in the commencement of pregnancy, particularly with the first child: it generally lasts until the quickening sensation is felt, and no longer. If the vomiting or puking is not severe, it will do no injury; but if it should continue, or become severe, which is sometimes the case, you will find relief in the following treatment.

*Treatment.*—If the habit of body be full, that is, strong and fleshy, the loss of some blood from the arm will be proper. But, if the woman should be weakly and delicate, omit the bleeding, and use the following remedies: of Columbo root and camomile flowers make a strong decoction of tea, to which you may add a little ginger: let this tea get perfectly cold, and give three or four tablespoons full occasionally. Or you may obtain the Colombo root in powder, and give fifteen or twenty grains, mixed with a few drops of peppermint, and a little good old spirits of any kind; or take an ounce of Columbo root, and bruise it with a hammer, then pour a pint of boiling water on it, and let it get cold. Take

a wineglassful of this decoction, with a few drops of peppermint in it, three or four times a day, or when you feel this sickness of the stomach. This bitter is very serviceable in weak stomachs and laxative bowels. Where the vomiting or puking is very severe, apply the stewed leaves of the garden mint to the pit of the stomach: the application must be warm, and it will stop the vomiting or puking without fail. Or purchase a box of soda powders, on which you will find directions, or if there are no directions, see the head "soda powders." Give these powders three or four times a day. Ginger tea, and mint tea, are also good remedies. Or use elixir vitriol, in doses of ten or fifteen drops, three or four times a day, in a glass of cool water. Should the vomiting be extremely severe, rub a little laudanum over the pit of the stomach: if this does not stop it, give ten or fifteen drops of laudanum, occasionally, in a little mint or ginger tea. In very stubborn cases of vomiting, the following will always give relief: mix in a phial, equal quantities of compound spirit of lavender, laudanum, and spirits of hartshorn; of this mixture, give a teaspoonful in a little cold water, three or four times a day, or as the sickness and vomiting may take place.

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## COLIC.

This is a common complaint during pregnancy; and this is the reason why I have cautioned you so particularly respecting your diet or food, and by all means to avoid costiveness or in other words, permitting yourself to be too long a time without having a stool. The bowels, during the time you are with child, will always be much subject to flatulence or wind, which is called in the country windy colic.

*Treatment.*—Bathe the belly with warm water, or sit in a tub in which there is warm water, and take a tablespoonful of castor oil. Or you may apply to your belly warm salt: or you may apply clothes wrung out of warm water to the belly, and throw up the funda-

ment, with the clyster pipe, the following injection: make a pint or quart of thin gruel; strain it clean, and put into it a tablespoonful of hog's lard or less; let it stand until it becomes milk warm, and take it as a clyster:—see the head clystering.

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### PAIN IN THE HEAD AND DROWSINESS.

When there is pain in the head, or a heavy dull drowsiness is felt, it is apt to arise from the blood vessels being too full. This is generally the case with fleshy, strong, healthy young women. In delicate and weakly women, pain in the head and drowsiness are sometimes felt, but they generally arise from an opposite cause, from a want of due circulation of the blood, which induces debility or weakness.

*Treatment.*—If the woman is fleshy and strong, and is thus afflicted, draw blood from the arm, and give a dose of laxative medicine, such as epsom salts, castor oil, &c. But, if on the contrary, she be delicate and weakly, bleeding in any way would be highly improper. She is to take moderate exercise on horseback, attend to the state of her stomach, and also to her food; use freely the tepid bath—see that head—take very gentle medicines, or a clyster to keep her bowels regular if bound; bathe her forehead and temples frequently with spirits, in which camphor has been dissolved; and take occasionally through the day, a glass of real good wine, or some toddy made with any kind of spirits. If this pain or heaviness of the head still remains, after the above means have been resorted to, it may arise from the stomach—if so, the Columbo root, as already described, will be found of great benefit.

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### HEART-BURN.

This complaint generally arises from acid on the stomach, and very few women escape it during pregnancy. If the heart-burn is attended with a constant hawking



up of tough phlegm, the stomach should be cleansed with a gentle emetic or puke, of fifteen or twenty grains of ipecacuanha. But, if the heart-burn is accompanied with a sour taste in the mouth, or a belching up of sour water, it will be relieved by the use of very weak lime-water, or a teaspoonful of magnesia in a cup of cold water. This last, or either of them, may be taken whenever these acid tastes take place. The magnesia is generally preferred in lumps, and may be eaten in moderate quantities, being perfectly innocent. When a considerable lump is used, it will act as a mild purgative. By adding a little rhubarb to the magnesia, it is an excellent purgative for women in a pregnant state. As both articles are quite innocent, they may always be used, when found necessary for opening the bowels.

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### SWELLED LEGS.

This swelling is produced by the womb, which is enlarged during pregnancy; the weight of the womb presses on the vessels which return the fluids from the lower part of the body. When the woman is far advanced, these swellings frequently give much pain; there is, however, no danger; nor should they give any distress to the afflicted woman. These swellings are very apt to go off if she will take rest on a bed, bathe her feet at night in strong salt and water, and steam herself over mullein, on which boiling water has been poured. As rest, in a recumbent or lying posture, lessens very much the swellings, it would be advisable for the woman to remain as quiet as possible, and loose a little blood from the arm occasionally. Attention to these things, with a little cooling medicine, such as epsom salts, or a little cream of tartar, will nearly always allay these swellings of the legs.

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### CRAMP.

Cramp generally comes on about the fourth month after pregnancy, and is often very troublesome at night,

while the woman is in bed. Its attacks are generally in the legs and thighs, but sometimes in the bottom of the belly and hips. Those women who have never before been subject to cramp, are very apt to have attacks of it during the last stages of pregnancy.

*Treatment.*—When the cramp is frequent and severe, the loss of a little blood would be proper. Cramp sometimes arises from costiveness or constipation of the bowels; when this is the case, give a clyster or a cooling purge, such as epsom salts. Standing a few minutes on a cold hearth with the feet bare, is a simple remedy, and will always give relief. I have known a small garter or belt, in which was confined some pounded brimstone or flour of sulphur, relieve several ladies who were much subject to cramp. Sponge the parts cramped with a towel wet with cold water, or slap the parts with the cold towel.

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#### CONSTANT DESIRE TO MAKE WATER.

The constant desire to make water, or pass off the urine, is occasioned by the weight of the womb constantly pressing on the neck of the bladder. Whenever this desire becomes troublesome, rest as quietly on your bed as possible, taking at the same time a cooling purge. If convenient, and whether so or not, the use of the warm tepid bath will be very beneficial; by which I mean that the whole body is to be placed in water about milk warm; if this be impracticable, for want of a vessel large enough, you may sit once a day in a tub of water of this warmth. The fact, is that by bathing occasionally in water milk warm, during any stage of pregnancy, much benefit will always be derived.

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#### STOPPAGE OF URINE.

This is called suppression of urine by physicians, and means when the water is stopped from flowing from the bladder, at those periods when nature requires the evacuation. When this stoppage takes place, the blad-

der becomes distended or swelled with the water, and is also severely painful. Relief must now immediately be had, by applying to the lowest part of the belly cloths wrung out of warm water, and taking a clyster of warm milk and water—(*see the head clystering.*) Clystering is extremely beneficial in this, and all similar cases, and women should early be taught to know, not only that there is no indelicacy in the operation, but that in all warm climates, it is absolutely essential to most women in a state of pregnancy. All the lying-in hospitals of Europe, are amply furnished with the apparatus for clystering; but in the western country of America, where there is certainly as much general intelligence as in any part of the world; it seems that you might as well desire a lady to swallow an elephant, as to take a clyster instead of a purgative medicine. This is all false modesty; the women of all countries ought to know, that the more simply their diseases are treated, and the more according to nature, the better will their health and safety be ensured. After the remedies just mentioned have been used without affording relief, you are to send for a physician, who will draw off the water with a catheter—for a description of which, and the mode of using it, look under the head catheter.

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#### WANT OF SLEEP.

On or about the last stage of pregnancy, most women become restless and uneasy, and their sleep very much disturbed. They are also troubled with a choking sensation, and difficulty of getting their breath. This last affliction is sometimes so great, that they are obliged to get out of bed, and to throw up a window for fresh air, which generally relieves them.

If the woman who is subject to these unpleasant feelings, be of a robust and full habit of body, the loss of a little blood from the arm will be proper; in addition to which some mildly laxative medicines ought to be taken to open the bowels. If the woman is of a delicate constitution, and much debilitated or weakened, bathe her feet and legs in strong salt and water, made pleasantly

warm, before she retired to bed ; and give her fifteen or twenty drops of laudanum, or if laudanum cannot be had, give her a glass of toddy, made with any kind of spirits.

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### PILES.

THIS is an uneasy and troublesome complaint, which frequently attends on pregnancy, and generally afflicts fat, stout women. The fact is, however, that most women are subject to piles, after the fifth or sixth month. In addition to the remedies I shall mention here, refer to that head where you will find a full description given of piles.

Women who have never before been troubled with this disorder, are apt to be afflicted with it as I have just mentioned, during the last months of pregnancy. It is almost invariably produced from costiveness or constipation of the bowels. The common oak-ball, pounded fine, and stewed down in butter without salt, is an excellent remedy. The parts are occasionally to be rubbed with this ointment ; whilst at the same time you are to take a gentle purge. You may, also, occasionally bathe the parts in cold water ; or you may put a tea-spoonful of sugar of lead, into a pint of cold spring water, and frequently bathe the parts with it during the day. As much rest as possible is to be taken ; in other words, walk or ride about as little as possible.

One of the best and most efficacious remedies in piles in pregnant women, is the following :—take equal parts of pulverized galls, which can be had at any medical shop, and common rosin, rubbed up with lard, say half an ounce of nut galls powdered, and the same quantity of rosin mixed with two ounces of lard, and let the female rub a piece as large as a nutmeg twice a day on and around the *anus*.

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### FALSE PAINS.

THESE pains resemble the pains of labor very much, and are frequently the cause of alarm, and much incon-



venience to all concerned. False pains are always produced from some deranged state of the system; or from the improper conduct of the woman herself, by excessive, and sometimes slight fatigue. Anxiety of mind; sudden exposure to cold or heat; want of attention to the bowels; indigestion, or eating such articles of food as produce wind in the bowels, will frequently produce these pains. Dysentery, accompanied with severe griping, will also produce these pains.

When these pains occur frequently, it will be proper to employ an experienced physician, because their too frequent presence may produce miscarriage, or in other language, the loss of the child. On discovering the pains to be false, which must be ascertained by the physician or midwife, either of whom should be well acquainted with the mode of conducting an examination, they are to be removed as speedily and easily as possible. If there is much pressure on the mouth of the womb from above, and if it is perceived to dilate or open during the continuance of the pains, they are not false, and the woman may be considered in labor; but if neither pressure nor dilation or opening can be felt, the pains are false, and are to be removed.

When these false pains are caused by fatigue, the patient should be kept as quiet as possible, and take the necessary rest to remove the fatigue. If she be of a feverish disposition, she must lose a little blood; and generally, it will be proper to give a gentle dose of laxative medicine, or some mild and opening clysters.

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### FLOODING.

Flooding is a disease incidental to pregnancy, often of a dangerous and fatal character, in which there is a loss of blood from the womb. It is fortunately, of not very frequent occurrence; but when it does come on, you are to lose no time in obtaining a skilful and experienced physician. It is a case in which merely common skill and experience will seldom answer, because it is frequently attended with abortion, and often with the loss of life. Flooding is usually produced by a sud-

den fall, by over-exertion, by fright and alarm, and not unfrequently by the *gloomy* and *depressing passions of the mind*. It is also produced by weakness of the womb, originating in miscarriage, or other injuries derived from severe labor in child-birth. It also sometimes arises from the *after-birth* separating from the *womb*, and the large blood-vessels entering into it, discharging their contents through the mouth of the womb. This complaint is very alarming to persons well acquainted with its real dangers, because death frequently comes on suddenly, and with very little warning of its approach.

No discharges of blood ever take place from the womb in a natural and sound state of pregnancy, the idea of regular discharges in pregnancy is entirely erroneous and perfectly farcical; and whenever they do take place, they always prove to the man of skill and judgment, that there is something *wrong*. They always either proceed from the passage to the womb, or from the womb itself. When they merely come from the passage to the womb, they are seldom, if ever, attended with danger; but when they proceed from the womb itself, there is considerable danger that disagreeable consequences may be the result. When but a little blood comes away, from much walking or riding, or from standing in an upright posture, and there is only a trifling pain in the lower part of the belly, attended with no symptoms of fever, and no increased or inflammatory action of the blood-vessels, the blood may always be presumed to come from the passage of the womb.— This can always be removed, and that very easily, by lying a short time in a recumbent or horizontal position; and afterwards avoiding much walking and riding, and long continued standing in an upright posture. But, mind me particularly, when the discharge of blood is preceded or accompanied with *flushings* of the face, considerable *heat* in the palms of the hands, and *great thirst*; or when there are *great pains* in the lower part of the *abdomen* or *belly*, in the *loins* or in the *back*, it is evident that the discharge of blood is from the womb itself, and also that there is *much danger*.

*Treatment.*—The first step to be taken, when the flooding proceeds from the womb itself, and may therefore be considered dangerous, is to place the woman in bed, and keep her as cool as possible, by removing the bed clothes, and admitting the cool and fresh air; and, as you value the life of your patient, give her nothing to eat or drink of an inflammatory or heating nature; in other words, nothing that will *increase the action of the blood-vessels*. I have told you before, that in this case, which is a dangerous one, a skilful physician must be obtained if possible. The woman should be immediately bled from the arm, freely, copiously, and *rapidly*, so as to produce *fainting*, because this is the moment, if ever, when those clots of blood are formed and congealed, which puts a stop to the great discharge from the blood-vessels. Apply at the same time, to the belly, cloths wet with the coldest water, or even ice wrapped in very thin cloths, if it can possibly be procured. If the blood should continue to flow, in any considerable quantity, a soft piece of cloth ought to be introduced up the birth-place, also wet with cold water. These cold applications, however, ought not to be continued so long as to produce a *chill*; but while they are continued, they ought to be occasionally and often renewed. A clyster of cold water, occasionally thrown up the fundament, will also be very effective in stopping this flooding.

If the above remedies should fail, which is sometimes the case, give the patient a bolus of three grains of kino and three of alum, made with a little conserve of roses; slap or sponge the small of the back with a towel dipped in cold water, or salt and water, or water and vinegar; if this should not stop the flooding, repeat the bolus in half an hour or less time, and use the cold towel frequently. You may also put twenty or twenty-five grains of sugar of lead in a quart of water, and when it is dissolved, you may throw about one-fourth of it up the bowels, and with the residue, occasionally wash the birth-place; these measures will greatly assist the cure, and if necessary, they may be repeated two or three times. The last remedies mentioned, are generally attended with relief; but there is always consid-



erable danger of the return of the flooding; therefore, it is very immaterial how well the patient may feel after relief, she must continue in bed three or four weeks, and be kept cool and quiet, always ready for the application of cold wet cloths to the belly, and up the birth-place: her situation will still be dangerous for that length of time, and without this cautious and circumspect conduct, she may still be lost without three hours warning of her fate. If, however, all these remedies should fail to stop the flooding, and to prevent its reaching the stage in which the woman would inevitably perish, an *abortion* must be resorted to, as the only possible means of saving her life.

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#### ABORTION,

*And the means to be observed in preventing or procuring it.*

I intend by *abortion*, the expulsion of the fœtus or child, at such an early period of pregnancy, that the child is either dead when it is brought forth, or dies soon afterwards. Whilst speaking of *flooding*, many of the symptoms and circumstances attending miscarriages or abortion, are named; but there are several others which precede and cause abortion, which must be particularly mentioned. They are the following, and are always to be guarded against or removed by pregnant women, if they wish to preserve their burthens until the expiration of the period fixed by nature. Severe and oppressive exercise; violent and sudden exertions of strength; sudden and agitating frights; fits of excessive and violent passion; excess of venery, by which I mean too frequent sexual communication with the male; a morbid or diseased state of the womb; external injuries of all descriptions which affect the generative organs, and generally an excessive debility or weakness of the whole system. I say nothing of those means of procuring abortion which are sometimes used by pregnant women, with the *intention* of relieving themselves of their charge—these are matters to be referred to the lofty and unerring tribunal of God himself;



they are accounts between such women and their Maker.

Generally speaking, before abortion comes on, there will be some slight pains felt about the lower part of the belly, and also in and about the loins; there will be a looseness and flabbiness about the breast, and some general sensations of shuddering and coldness; and in women of full, strong and muscular habits of body, there will nearly always be some considerable degree of fever. Next to these symptoms, slight discharges of blood will take place from the womb; and these discharges will continue to increase, perhaps occasionally stopping a short time, until they amount to absolute *flooding*, which I have particularly described. When these discharges return, after they have become copious and debilitating, they are always attended with a sense of *dead weight*, and a heavy *bearing down* about the womb, great *sickness of the stomach*, and sometimes *frequent faintings*. These are self-evident indications of immediate miscarriage or abortion, which soon takes place, and is always followed by profuse bleeding, which soon, however, subsides. After the expulsion of the contents of the womb, and the bleeding has gone off, there is a serous or watery discharge mixed with a little blood; but this is a matter of no consequence.

This is an abortion according to the dictates and operations of nature herself. It may sometimes, however, be avoided, by observing the following simple treatment: On the occurrence of the first symptoms of abortion, the woman must be placed in bed, and kept cool and quiet until the matter be decided. If she is of a full and strong habit of body, she must be bled. Every thing of a heating, irritating and stimulating nature, either as food or drink, must be entirely avoided. Nothing but cold water or very weak tea is to be drank by the patient. The bowels may be opened, if costive, and kept open, by merely injecting up them some milk-warm water. The irritation of the womb is to be lessened immediately, and as much as possible; to effect the lessening or reduction of this irritation, the woman ought to be placed in a tub of warm water, and when taken

out, to have large quantities of sweet oil rubbed about her back, loins, belly and back. If these means fail in preventing the abortion, nature will effect the expulsion of the child, in the manner I have just described. She may, however, be assisted in her exertions by the following means: The woman is to keep quiet, and treated as in common labor; after which, cloths wet with cold water must be applied to the belly, to aid in the contraction of the womb, after the expulsion of its contents.

When abortion is to be brought on, in order to stop profuse and dangerous flooding, it is to be done in the following simple and easy manner. I will here adopt the language of Doctor Bard, with some observations. "The woman is to be brought down to the edge of the bed, either lying on her side, with a pillow or two between her thighs, which are to be drawn up—or lying on her back, with her hips a little raised, and her feet on the lap of an assistant on each side. The operator must sit on a low seat immediately before her: whilst a double sheet thrown over her body and that of the physician or midwife, must protect her from cold, and form a decent covering. The hand of the operator, well rubbed with good oil or hog's lard, with the fingers collected into a point, must then be slowly introduced through the birth-place to the mouth of the womb, which will sometimes make considerable resistance against attempts to open it. This resistance must be overcome, by cautious, gentle and patient efforts. When the mouth of the womb begins to dilate or widen with the efforts of the operator, one of the fingers must be introduced into it, then another, and so on, until by patient and gentle attempts, it admits the hand. The efforts to dilate and widen the mouth of the womb—and you must remember this particularly—are always to be suspended or stopped, whenever the pains come on, and whilst they are on. In other words, whenever the pains cease, you are to proceed in your efforts to widen gently the mouth of the womb. When the hand passes into the womb, it is to be opened and laid flat; this will prevent a contraction on the knuckles, which might rupture the neck of the womb, and do much injury. The mouth of the

womb being sufficiently widened, if the hand can then be easily passed over the part of the contents, called by physicians the placenta, or after-birth, which is separated from the womb, until the fingers reach the membranes, this is to be done; and breaking the membranes, it is to be immediately passed into the womb. But if you cannot readily pass the separated portion of the placenta, and the flooding be great, you are to pass through it, which is less dangerous than to separate a larger portion, by passing the hand between it and the womb. The hand being now in the womb, the neck will generally cling so close to the waist, as to prevent the escape of much water, and you will find room to act with freedom. Here you are to deliberate, and to refresh the woman with some proper drink. You ought now to get at the feet of the child, by all practicable and gentle means. You are to recollect, that the most natural presentation is the most common; and in that case, the child's head is at the brim of the pelvis or basin, with the face and belly to the back of the mother, the knees bent to its breast, and the feet towards the upper part of the womb. As, therefore, the child must be ultimately turned, this is the best time to keep the head and shoulders up towards the fundus, and to turn the face of the child to the back of the mother, which is most easily done within the membranes; by this movement, the feet of the child will be brought within reach of the hand, and having secured them, they may be easily brought by a waving motion, into the vagina or birth-place. You are always to remember, that you are to pause whenever a pain comes on. Next you are to bring down the hips and body of the child; and if it be necessary, to turn the child gently, so that when it is delivered to the arm-pits, the belly of the child shall be turned to the back of the mother, which is the position in which the arms and head can be most easily delivered. Now, or before this time, examine the navel string, and occasionally pull it down a little, so as to prevent its being stretched. If the pulsation has ceased in the cord, or if the woman floods freely, either the child or the mother may be lost by delay; and you are to finish the



delivery as soon as you prudently can, in doing which you are to remember that gentleness, caution and dexterity are to be used in preference to force.

There are few conditions more truly dangerous and alarming, than flooding to any excess, towards the expiration of the natural term of pregnancy; and I therefore strongly and emphatically advise, that in all such cases, where an experienced and skilful physician can possibly be had, he be immediately sent for—and especially where a forced abortion is essential to the preservation of the life of the woman. Such cases always require skill, judgment, promptness of conduct, and decision of resolution; he must therefore be a man who can decide coolly, and act with firmness and caution. After the delivery, or rather the abortion has been produced, the womb may be assisted in its contraction, and the flooding retarded and stopped by the means I have already noticed so plainly; in addition to which, the rest of the woman will be promoted, and her recovery much hastened, by small or weak anodynes, in some cordial or julep, such as spirituous cinnamon water, or a little good weak toddy with nutmeg. These are the remedies first called for, and they are to be succeeded by small portions of nourishing diet, repeated with caution whenever called for, and by strengthening articles, such as tonics in which Peruvian bark has been infused, and port wine, in which cinnamon bark has been infused.

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### LABOR.

The commencement of labor means, the time the woman begins to be delivered of her child. She is always warned of the approach of her time, by pains which are called labor pains. They are produced by contraction or drawing up of the womb, which at the commencement expels or forces out a slimy matter, generally colored with blood, which is called the shew.—As soon as this matter is discharged, the mouth of the womb, at each pain, begins to open and widen itself, so as to permit the contents of the womb to pass. You



will recollect, that I have before informed you what the womb in pregnancy contains. These pains increase gradually, the belly diminishes in size, and the womb seems to sink, or approach nearer to the birth-place. The pains are at first quite short, and only come on after considerable intervals; the woman is now restless, first hot and then cold, and not unfrequently sick at the stomach. She is also often griped, and frequently belches wind, or passes it off backward, which should never be restrained from false delicacy. These pains now fly quickly to the back, and then again to the bottom of the belly. The woman has now a great desire to urinate, or make water frequently, and to go to stool. These inclinations are always to be attended to, because emptying the bladder, and evacuating the bowels frequently before actual child-birth comes on, are highly important, and ought never to be neglected. The pains having been sharp and some time between them, she then begins to be uneasy and fretful, and requests something to be given to her, to bring on the pains more rapidly.

This is the precise point of time in which so many injuries are done, by ignorance and officiousness, in attempting to force nature into premature exertions, who if left alone a little while, would in almost all cases perform her office, according to the dictates of divine wisdom, and with safety both to the mother and child: for you may be assured that what you so much dread, is intended for your eventual benefit, by permitting the womb gradually to distend or open, with perfect safety to the parts, and in order that you may be blessed with an easy birth, and a living and uninjured offspring. You will always know the pains I now speak of, by an irresistible desire to catch hold of every thing within your reach, such as the bedstead, a chair, and so on. These pains, as I have already told you, arise from the constant efforts of nature to open the mouth of the womb, and they must and will continue, until she accomplishes her end.

When this is the case, and the mouth of the womb is sufficiently widened, nature will immediately com-

mence her efficient and powerful operations, to press down the infant, so as to empty the womb. You will immediately know this change, by a pressing down pain, if I may be allowed the expression, which gradually increases to a strong sensation of bearing down. Although these forcing pains are powerful and strong, yet the woman will bear them with more apparent ease and fortitude, than those which were felt in the first stage of labor. At this time, the membranous bag which contains the child and the waters which surround it, and which I have before described to you, is pushed out of the womb by degrees at every pain. The distance which this bag extends out, varies in size in different women; sometimes it is very small, and sometimes of considerably large dimensions. It continues gradually to force open, and to widen the mouth of the womb, until it opens the parts sufficiently to permit the head of the child to pass. You will now perceive, that by these gradual exertions of nature, to arrange and prepare all things properly, those delicate parts, which by sudden and powerful exertions would have been seriously injured, are now sufficiently enlarged to permit the birth of your infant without injury. And you will also discover, by what I have disclosed to you, that if nature is hurried by an imprudent physician or midwife, by forcing the child away before the parts are sufficiently widened, great and signal injuries must be the consequences, both to the mother and child.

As soon as the parts are sufficiently prepared for the birth of the child, this membranous bag bursts open, and the waters are discharged; sometimes, however, these events take place at an early stage of the labor. When this is the case, the labor is never so easy as under other circumstances. The quantity and quality of this water, differ in different women, as I have before told you. Then, when these waters burst forth in proper time, which I have pointed out, the bearing down pain continues, and the child gradually enters into the world. As soon as the child's head passes, the woman's relief is very great, and a little rest ought to be allowed her: you are by no means to pull the body

out by force, for so doing, you will produce great injury to the soft parts, and at the same time render it very difficult to deliver the woman of the after-birth.

I must here remark emphatically, that this is another stage of labor, at which thousands of women are injured materially and fatally, by the hurry and officiousness of midwives in hastily forcing the birth. Give time, and I will ensure that nature will exercise sufficient power to expel the child in her own time. The body of the child is not to be pulled and forced outward; let it alone—converse with the sufferer, and cheer her spirits, and tell her that from the time the child's head makes its appearance, she is not to force and bear down. Tell her that by so doing, she will force the child forward, before the parts are ready; and that the consequence may be, the tearing or rupturing the perineum. This is the part between the fundament and the birth-place. Tell her that such injury would leave her in a wretched condition for life, and must be avoided by all means. It is the duty of the midwife or physician, as the child's head passes, to keep one hand pressed firmly yet cautiously against the perineum, which must of course, from distention or stretching, be very thin and easily torn; and at the same time gently press so as to incline the head of the child upward towards the pubes.

When the woman has rested, and the pains again come on, the hand must again be pressed against the perineum with steadiness and care, until the shoulders and hips of the child pass, at the same time gently supporting the child, and delivery is over so far.

The child being now born, you are to permit it to lie still a few minutes, without being molested. Give it fresh air, and time to breathe, and the pulsation in the navel-cord will begin to diminish. This pulsation, by all means, should be suffered to subside, before you separate the child from the mother. You will then, with a waxed thread, or a small string, make a moderately firm tie about the navel-cord, about three inches from the navel of the child; then make another tie, about three inches further from the child, on the navel-



cord, and cut the cord asunder between the two ties, with a pair of scissors or sharp knife.

You are now to hold steadily, but by no means, as you value the life of the mother, to pull the navel-cord which has been tied and cut off, because this cord is attached to the after-birth, which is still in the body of the mother, and is yet to be delivered. Permit me to caution you, to implore you, to command you, not to pull away, by force, the after-birth; for I do now know some of the finest women in the United States, who are suffering daily and hourly, and will continue to suffer during their lives, from officiously and imprudently forcing away from them the after-birth, which nature herself would have effected without risk or pain, had she been left to her own exertions. By pulling away the after-birth before the proper time, and before nature expels it by what are called after-pains, the consequences will and must always be, flooding, and great loss of blood; because you force the separation, before you give time for the contraction of the blood vessels—in other words, before the mouths of the blood vessels have had time to close. In fact, the exercise of common sense cannot fail to teach you, that where the after-birth is yet connected with, and strongly adheres to the womb, force will always tear the womb from its connexions, and be productive of unspeakable injuries.—From this plain statement of facts, and the reasoning I have employed, I am convinced you will exercise due caution, in a matter of such vast importance to the future health and safety of the mother.

According to the old usage and practice, the child would be immediately washed in warm water, and not unfrequently in spirits. Either of these plans of treating the infant, in fact both of them are highly improper, and have been the causes of destroying thousands of children. Warm water or spirits, ought never to be used in this manner, unless the infant be born apparently dead; in such a case, warm water, merely is proper to be applied. For a further explanation of this important matter, look under the head “treatment of newborn infants.”



The woman having rested for a short time, after her separation from the child in the manner I have described to you, the after-pains may be expected to come on, for the expulsion of the after-birth. These pains are produced by the contraction or drawing up of the womb, to deliver or expel this after-birth; they generally come on, in the lapse of from fifteen minutes to an hour, after the child has been brought forth. You are now to remember, that none but gentle and simple measures are to be used, in order to produce the expulsion or delivery of the after-birth. You are now to rub the belly of the woman, and gently extend or pull the cord at the same time that she blows with some force into the palms of her own hands; the policy of this blowing is obvious—it will cause a gentle and natural bearing down, without the straining which would arise from holding and forcing the breath. If the woman be healthy and strong, if she has lost no blood, and if she feels able, let her stand up, and support herself on the shoulders of the operator or physician, while he is endeavoring, by the means just pointed out, to relieve her of the after-birth. I have, however, often succeeded in delivering the after-birth, when the womb would not contract, and when the woman was in a lying posture, by introducing the finger up the birth-place, and gently turning it around in the mouth of the womb; in this case, the sensation felt in the mouth of the womb, will generally cause it to contract, and expel the contents.

If all these means fail, and an hour passes without the expulsion of the after-birth, you are to introduce your hand with great caution, the parts being very sore, and open your fingers inside and round the edge of the womb; at the same time that you feel cautiously, and slowly separate, between the edges of the after-birth and the womb, any parts which may adhere as the womb gradually closes. When the after-birth is expelled or brought away, and any great discharge of blood takes place, apply to the belly some cloths wet with cold water, and put one up the birth-place, as directed in flooding. The woman is then to be wiped, or

very gently rubbed dry, and suffered to rest quietly for several hours.

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### DIFFICULT LABOR.

Most cases of tedious labor, arise among women with their first child, with women who have married late in life, and with those who are so healthy, robust, and corpulent, that the parts seem to relax so slowly, as hardly to permit the birth of the child. The loss of some blood from the arm will be proper; and I have frequently, after bleeding, put them in warm water; in doing this, however, you must be careful as to the child. I have known instances, in which women have had their children in the close-stool or pot, while in the act of endeavoring to urinate or have a stool. The warm bath and bleeding will relax the system, sufficiently in all probability for the child to be born; but take care that the child is not injured by the water, while the woman is in the bath.

When convulsions or fits take place during labor, and the woman has before complained of great pain in the head and dimness with loss of sight, remember that you are to bleed freely, and to open the bowels with clysters, or some gentle laxative medicine. The most powerful means, and the best known, for relieving tedious or difficult labor is blood-letting from the arm; and it should always be done if the woman is strong, healthy, and of a vigorous constitution.

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### TWINS.

What I have already said on the subject of labors relates to cases in which nature presents the mother with but one offspring from a pregnancy. You are well aware, however, that she sometimes presents a parent with two children; and, in the western country, if ru-

mor speaks the truth, she in more than one instance, has not even stopped at this number. In about ninety-nine cases out of a hundred, the directions I have given you, which relates to the birth of one child, will be found sufficiently ample and particular; but I must not omit to instruct you also, as to cases of child-birth, in which more than one child is to be born.

It is not easy to ascertain, that there are twins, or more than twins to be born, until after the birth of the first child; and if there are three to be born, not until after the birth of the second. Where twins are to be produced, the membranes of both children may be felt at the birth-place, sometimes before the delivery of one of them, but not often; and sometimes, but very seldom, it may be distinguished on examination, that different parts of both children present themselves. Twins are always considerably smaller than single children, which generally causes their birth to be more easy and rapid; in fact, the rapidity of a first birth, generally produces the first suspicion that there are twins. Generally speaking, immediately after the birth of the first child, another may be felt by very accurate pressure on the belly of the mother. But if the womb be very capacious or large, rather than subject yourself to great uncertainty, the hand may be very cautiously and gently introduced, and the child distinguished by the touch.—Where there are two twins, the second child is brought forth, within about an hour of the first, and in a position directly contrary to the first; so that when the first is presented with the head foremost, the second may always be expected with the breech or feet foremost.

“The first child being delivered,” says Dr. —, “as prescribed in single cases, some time must be allowed to recruit the woman’s strength, and to afford nature time for bringing on the next delivery. There are cases in which it would be necessary to wait even three or four hours. 1st. When artificial aid was used in the first case. 2d. When the child presents unnaturally.—3d. When fits of flooding come on.

“When both children present naturally, and the labor of the first ends without aid, and without much fatigue

to the patient, I wait for the secondary pains; but should these not come on in a reasonable time, four hours, I introduce my hand cautiously, and rupture the membranes; when, commonly, the second child passes readily through the pelvis or basin. If the first labor has been natural, and the second child presents in a wrong direction, I have, generally, without delay, extracted it by the feet. If the first labor has been unnatural, with but little delay, the membranes are to be ruptured; and, whether the child should be brought down immediately, and delivered by the feet or not—the operating physician or midwife must decide. The rules applicable to twins, will equally apply to cases where there are three or more children.”

Where a woman has brought forth twins or more, great care and attention are necessary to prevent her from fainting. She should, therefore, not have her head raised or elevated; and even in moving, should have herself rolled over in the bed. A broad bandage round the belly, should never be omitted in the case of twins, to support the belly of the mother. The directions I have already laid down, respecting the after-birth of single children, are fully and entirely applicable in the cases of twins, and more children even than two.

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#### DIRECTIONS FOR MIDWIVES.

The following remarks are especially intended for the serious consideration and benefit of midwives; and indeed of all such as are in the practice of officiating in the delivery of pregnant women. Regularly bred and licensed physicians are always presumed to know their duties, and to perform them with skill and judgment, in this highly responsible department of their profession.—The practice of midwifery, by those who are not regularly taught the medical profession, and who are presumed to know little or nothing about the organization of the human system, implies the assumption of a most awful and dangerous responsibility; especially when it is considered, that the fatal consequences, of ignorance



and presumption, if combined with total disregard of moral feeling, duties, and principles, are nearly as chargeable with criminality, as if they proceeded from voluntary and intentional violations of the laws of God! There is very little difference, in other words, between the disregard of those duties which are enjoined by the laws of justice and humanity and their palpable and unconditional violation.

The directions which I shall lay down for your considerate adoption, will be plain, simple, and natural; they will be obscured by no technical language, and rendered unintelligible to you by none of the mysteries of the medical profession and if you scrupulously attend to them, they will enable you to be successful in ninety-nine cases of midwifery out of a hundred, in which you may be engaged. If you wish to be esteemed great and skilful in your calling, and if you desire to be an instrument in the hands of divine providence, for affording consolation and relief to your sex, in the hour of affliction, treasure up the salutary advice, and never lose sight of it—that you are never to force nature; that you are to give her time to perform her operations; and, if you have any doubts as to the success of the delivery, you are to run no risks, but to call in the aid of a skilful and experienced physician. By attending to this course of conduct, you will relieve yourself of dangerous responsibilities, discharge your duties to a fellow creature, and appear in the presence of your Creator, with the consciousness of having acted in obedience to the most solemn injunctions of humanity.

1st. Immediately on your being called to deliver a woman, your first inquiry of her should be, as to the state of her bowels, whether she has had a stool, and whether she is bound or constipated in her bowels. I need not tell you, that the discharge of the bowels, and also of the urine or water from the bladder, are both important and even necessary—first, in preventing injuries to the parts, as the child enters the world—and second, to render the labor and birth more easy and safe. You will, of course, therefore, strictly attend to these evacuations, and in proper time.

2d. You are now to ascertain and determine, whether actual labor has taken place or not ; and, the only certain and satisfactory signs of actual labor, are such as I have before minutely described to you. The mouth of the womb is to be felt, by introducing the finger with much tenderness up the birth-place ; and if you feel that it dilates or opens, during the time that a pain takes place, the woman is in actual labor.

3d. When examining, conduct the operation with caution and tenderness ; and at the same time, take care to have your nails closely and smoothly pared, because your finger will feel the membranous bladder or bag containing the waters. If the labor be not much advanced, you will only feel the mouth of the womb and its dilatation or opening at every pain.

4th. Place a pillow between the thighs of the woman, so as to give sufficient room for the child to pass, and for its head to rest upon as it enters into the world, and let the woman draw up her legs.

5th. As the head of the child advances, press your right hand steadily and firmly against the part between the fundament and birth-place, called by physicians perineum, so as to give it support, and prevent its rupturing or tearing ; at the same time that you incline the child's head to the tubes, which are the parts which form the arch in front. If you will recollect, and if you do not, read the part over again, I have fully described and enforced the necessity of your being extremely careful to prevent injuries to the perineum ; for by its being ruptured or torn, which is sometimes the case from incautiousness and imprudence, as well as from hurrying the birth, the lower gut or fundament, and the birth-place itself, become one opening from the tearing or laceration of the perineum. On this point, then, let me again urge you to be extremely careful.

6th. If the child's head advances forward too rapidly, resist or stop its passage outward, for one or two pains, with your hand ; by these means you will increase the powers or energies of nature in the mother, avoid all risks of injuring the perineum, and give ultimate facility or ease in the delivery.

7th. So soon as the head is delivered, the woman will have some respite from her sufferings. You must then converse with her, and encourage her to be patient and firm in her resolution. Remember now, that the head of the child is to be supported, and that no force or pulling whatever is to be used. You are to wait patiently, for the next exertions of nature, who will always perform her operations in due time; the woman is by no means to strain, bear down, or force her pains. As I told you before, and gave you the reasons, she may blow strongly into the palms of her hands, but exercise impulsion or force no further.

8th. The child being born, you have now nothing to do, for a few minutes, but to give it fresh air, and permit it to cry. After it has had sufficient time to breathe freely, and the navel cord has in some measure ceased its pulsation, the cord is to be tied about three inches from the navel of the child, and then again about an inch and a half from the first knot, and cut asunder between the two ties, with a pair of scissors or any other sharp instrument. But I have told you this before.

9th. When the child is separated from the mother, you are not to wash it, according to the old custom, this is a wrong and highly improper plan, and frequently produces serious injuries to the child, as you will be fully informed by reading under the head "treatment of new-born infants," which you will find among the diseases of children.

10th. Now comes the period in which so many women are injured for life, by ignorance and imprudent haste. Let the woman rest a short time, and await patiently the return of the pains which are to expel the after-birth, which the womb will do by contraction. Your own good sense will teach you, that if you pull or force down the after-birth, you will also pull down the womb, or separate the after-birth before the womb has contracted, so as to stop the blood vessels from pouring out their contents. Now, if you do pull, after all the advice to the contrary I have given you, the consequence will be, that the woman will bleed to death. I have told you before, how to excite the womb to action,



so as to bring on the pains for expelling the after-birth. You are to rub her belly; and if she is a strong woman, and feels able, you may, by assistants, raise her up by supporting her under the arms. She may then blow in her hands, a long breath, for the reasons I have already given you. As soon as an after-pain comes on, the midwife is gently to stretch the cord, but not to pull it or use any force. By the motion of the cord, or its gentle extension, the after-birth is very apt to come away. If you do not think proper to use these measures, you may turn the woman over on her belly, and introduce your finger into the mouth of the womb, with much care, the parts being extremely sore; then turning the finger gently round the mouth of the womb, as you would round the edge of a cup, the womb will contract; now gently stretch the cord, and you will extricate the after-birth, generally speaking, with safety. An hour, an hour and a half, or two hours, may be allowed for the expulsion of the after-birth.

When it cannot be delivered, proper means are to be used for its expulsion, in other words, for its discharge. These means are the following: Let the midwife introduce into the birth-place, her hand, with the fingers collected into a point, and made as small as possible. At the mouth or edge of the womb, let her open or extend her fingers, and rub them carefully round the edge. These measures will cause the womb to contract; then, with the fingers gently introduced between the after-birth and the womb itself, she must slowly separate them from each other, should they adhere or stick together. Recollect distinctly, that all this is to be done while the contraction is going on.

11th. If the discharge of blood is great after this operation, apply cloths wet with cold water to the belly of the woman, as in flooding; and push up the birth-place gently, and not too far, a soft cloth also wet with cold water, as directed in flooding.

12th. When the woman is relieved of the after-birth, let a wide bandage be placed round her, pleasantly tight, and let her also be wiped dry. The clothes which are wet, and those which were placed under her, are



now to be removed, and she permitted to remain perfectly quiet, and to take her repose. If she complains of faintness, or seems exhausted, give her some wine and water, or a little toddy on which some nutmeg has been grated.

I have now given you a full description of what I intended, and I am persuaded in such plain terms, that any woman of common sense can afford the requisite assistance in common cases of labor.

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### DIRECTIONS AFTER LABOR.

After labor, the more quiet the woman can be kept the better. The fact is, that she is to move, or be moved, as little as possible, and to lie principally on her back. Her nipples are to be washed with milk-warm water, before the infant is put to the breast, which ought to be done within twelve hours after the birth. If the woman has lost considerable blood during the labor, the milk will be longer in flowing than otherwise. When this is the case, apply bread and milk poultices warm over the nipples; these will soon cause the milk to discharge.

You will frequently observe, in women who have had children, that their bellies protrude or stick out, as if they were always in a state of pregnancy. This is owing to neglect and bad management. To avoid it, on the second day after child-birth, you are to apply round the whole belly, moderately tight, a broad bandage of of cloth or flannel; the last is the best, which is to be worn for at least one month. It is not to be too tight, but merely tight enough to support the parts pleasantly. This will prevent the woman, after having recovered from having a large and ill-shaped belly.

You are now to bear in mind, and that too, particularly, the advice I am about to give you, especially if you value your health, and probably the preservation of your life. On the second day after delivery, you are to take a dose of castor oil or epsom salts. More than

two-thirds of the women who have been afflicted with, and finally died of child-bed fever, have owed their fate to neglecting, after the birth of their infants, to attend to the evacuation of their bowels. If you do not like to take salts or castor oil, evacuate the bowels with clysters : see the head clystering. The fact is, you are not to let twenty-four hours pass, after the birth of a child, without a passage or stool. The consequences of this neglect always are, that it is not only an injury to yourself, but the child. When you have such passages as I have told you are necessary, you are not to exert yourself by getting out of bed, but to have a basin or other handy convenience placed under you ; folding a blanket at the same time to prevent you from getting wet. In this way, without any danger or indelicacy, have these passages, from which you will receive much relief in body and mind, and derive much benefit in your recovery.

You are every day, without fail, to have the birth-place washed with milk-warm water and good clear milk. This is to be done, by putting under the bed clothing, a basin of warm water, and having your hips and thighs raised with a pillow or some bed clothes.—In this situation, a common squirt made of elder or cane may be used, or a female syringe, which can be procured at any Doctor's shop in the country. Every day warm water is to be thrown up the birth-place, so as to cleanse the parts ; and to remove any clots of blood or matter, called by physicians the *lochia*, which by remaining would produce irritation and fever. If you wish to escape childbed fever, and the whole train of afflictions incidental thereto, you are particularly to attend to these directions.

In two or three days after delivery, for a short time, you may sit up in the bed, supported with a chair at your back, covered with pillows ; this will assist the natural discharges from the birth-place. You are not to stand up before the sixth day ; and in making any change, you are to do it very gradually. You are to be kept neither too warm nor too cool ; the air of the room is to be kept pleasant and agreeable ; and you

are never to be exposed to a current of air. Two weeks after delivery, is about the general time of leaving your room; this, however, will depend on your situation; caution must always be used in the change, so as to bring it on gradually. Sudden changes are always dangerous, to women immediately after delivery, and indeed until after they are completely restored.

From the moment the woman is delivered of her child, the whole system becomes inclined to fever, and particularly for three or four days after delivery. Your own good sense will now teach you, that the practice of giving in such cases spirituous liquors, highly seasoned food, heating meats, and strengthening medicines, is directly contrary to what ought to be done; giving such matters as I have just named, keeping the woman in a constant sweat, and closing the room so as to confine all the foul air around her, are the very means of bringing on the fever which you ought to endeavor to escape. Therefore, let me tell, in as plain and emphatic language as I can find, that whatever adds to the heat of the woman's body, or to the febrile or feverish action of the system, will always encourage the coming on of fever, or increase it if it has come on. On the contrary, light cooling diet must be used; the woman must neither be subjected to extremes of heat or cold; her clothing and her bed chamber must be so attended to, as neither to oppress her with coldness nor heat; attention to these things, in ten days or two weeks, after she has had her child, will so exempt her from fever, that in a little time her health will be fully established.

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LOCHIA.

This word is derived from the Greek. It means to bring forth, and also, the cleanings, by which are intended here, the serous or watery, and often green-colored discharges, that take place from the womb and birth-place, during the first three or four days after delivery, when they generally subside. During the first

four days, these discharges are apt to change their color, and frequently to become offensive, unless due caution and cleanliness have been observed.

If they are profuse or great, and there is considerable weakness, cloths wet with cold water must be applied to the belly. There must also be cold water thrown up the birth-place, and also a clyster of cold water taken, at the same time that some laxative medicine is taken to open the bowels; as these, however, are necessary discharges, they are not to be too suddenly checked, unless they seem to be going on to a dangerous extent.

On the contrary, if they should stop too suddenly, they must be immediately brought on again, by a course of treatment directly opposite to that I have just laid down. Applications of a warm nature must be made to the belly; and clysters of milk-warm water, instead of cold ones, must be given—see the head clystering. Should the woman be feverish, or of a fat and full habit of body, the loss of a little blood will be proper.

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### FAINTINGS.

If the woman should faint after the delivery of her child, ascertain immediately if there is a flooding.—Should this be the case, use the coldest applications, as directed under the head flooding. On examination, should there be no flooding, give her wine, or some toddy, or some spirit and water, and draw the bandage tight, for an hour or two, round her belly. If her feet and legs are cold, apply hot bricks, or other warm materials to them.

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### CHILLS.

When the woman complains of cold after her delivery, or that cold chills are stealing over her, which is sometimes the case, make warm applications to her belly,



feet, and legs, and give her nothing but warm balm or sage tea to drink. If the shake is very severe, let the person round the bed, grasp with both hands her thighs and legs, and hold them firmly but tenderly until the shivering subsides. Recollect, now, that you are to give no heating spirits at this time, or you will certainly produce a fever. Should the chills continue, you are to have recourse to laudanum or opium—see table of doses. These last articles are not, however, to be given, unless the chills continue, or are very severe.

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#### AFTER PAINS.

These pains are brought on by the contraction of the womb, in the exertions of expelling the clots of blood and secretions, which are contained in the womb after the birth. When not very severe, you are to let them alone; but if too excruciating and severe, you will generally relieve them, by applying cloths wrung out of warm water to the back and belly. If the pains continue to be severe, throw a clyster up the bowels or fundament, made of thin gruel, milk-warm, in which put a teaspoonful of laudanum—see the head clystering.

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#### INFLAMMATIONS.

From difficult or tedious labor, the parts frequently become inflamed and swelled; and sometimes there are quantities of blood, which form a substance in the mouth of the birth-place, which I believe has no name. Although there is no danger in this matter, yet it frequently produces great pain and uneasiness. These inflammations are to be relieved by cold applications, such as cold poultices of light bread and milk; bathing the parts with, and throwing up injections of cold water; or by making use of the following preparation: In a pint of cold water, put a teaspoonful of sugar of lead, and bathe

the parts with the mixture. Or you may rub them well with sweet oil, keep them cool, and daily cleanse them with cold water.

If the belly feels very sore on being pressed, bathe it often with warm water ; or apply cloths to it wrung out of warm water, and rub the belly well with the following liniment. Get equal quantities of spirits of harts-horn and sweet oil ; mix them well together, and rub the belly two or three times a day with this mixture. This with warm bathing, as just directed, will give immediate relief.

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#### INFLAMMATION OF THE BREASTS.

This disease generally arises from want of care, after delivery ; by which want of care I mean, that proper attention has not been paid to your system, in order to prevent fever, which is always produced from eating or drinking stimulating articles too freely, and before the milk has had time to secrete freely. This effect is also produced, by permitting the breasts to remain distended too long with milk. In this case, great pain with inflammation comes on ; in other words, fever is the consequence of this neglect.

If there seems any disposition to inflammation, the best preventive is to apply, a few hours after delivery, warm poultices of light bread and milk to the breasts, for at least three hours. This will assist the natural discharge of the milk. If the child refuses to suck, fill a common black bottle with warm water, and apply the nipple to the mouth of the bottle, which will gently draw the milk, as the water becomes cooler. Bathe the breast well with sweet oil or hog's lard, at the same time. If the inflammation continue, put a tea-spoonful of sugar of lead, in a pint of cold water, and keep a cloth, wet with this mixture, constantly to the breast, but recollect, you are not to wet the nipple with this mixture, by which means it may get into the child's mouth. When the inflammation is severe, Doctor

Physic recommends a blister over the breast. When matter is fully formed, make a small puncture or hole with a lancet, so as to permit it gradually to escape. I have always, however, relieved by poultices and sugar of lead, as above directed, without the painful necessity of using a blister.

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### MILK FEVER.

This fever is owing to the change of the system, after the delivery of the child, by swelling and irritation of the breast from the milk secreted in them. This always occasions the discharge from the womb to lessen in quantity. You will now recollect the advice I have given you before, as to applying poultices to the breasts for a few hours, anointing the breasts well with sweet oil or lard, taking some laxative medicines, and living on low diet. These measures and precautions, will enable you to avoid the following unpleasant feelings: heat, thirst, head-ache, and fever. Although this fever is quite common, and may be easily removed, yet the imprudence of neglecting the above advice, may be the cause of other complaints, which I shall in their proper places mention. If the breasts are painful, take a dose of salts to cool the system; and if the fever continue, the loss of a little blood from the arm will be proper. Drink mild balm or sage tea, in which put about twenty drops of antimonial wine. This drink may be given occasionally, so as to produce a gentle moisture or sweat on the skin. Take no heating articles, and live on light cooling diet. In a few days the milk will flow, and the fever go off.

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### SWELLED LEG.

This disorder takes place after child-birth, and I am happy to say that it seldom occurs, when due caution

and cleanliness have been observed. I am of opinion, that it arises from some irritating matter being left in the womb, or at its mouth. When you discover this disorder, which is known by a pain inside of the leg, extending to the heel and the groin, the limb always begins to swell, so that the slightest motion gives great pain. The pulse becomes quick, the skin hot, the tongue white, the urine thick. There are, also, slight pains about the womb, and the discharge from the birth-place is dreadfully offensive.

*Treatment.*—On the appearance of this complaint, get a syringe for females, or what will answer the same purpose, make a squirt of elder or cane, and throw up the birth-place, several times during the day, some warm water to cleanse it—and in the intervals of time, some good sweet oil. Wash the parts well, with water made pleasantly warm, and rub the leg or legs with the following ointment. Take a gill of sweet oil, a table-spoonful of laudanum, and to these add a gill of spirits in which camphor has been dissolved. With this mixture rub or bathe the legs twice a day; and provided the woman has no purging of the bowels, let her take at night, and also in the morning, two grains of calomel, mixed with the same quantity of squills, and made into a pill. This is to be repeated, until relief is obtained.

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### CHILD BED FEVER.

This disease is called by physicians puerperal fever. It generally comes on, from the fifth to the eighth day after the woman has been delivered; but its being earlier or later, depends very much on the woman's constitution, and the particular state of her system. I have before mentioned to you, that you are to be very prudent in your conduct, respecting your food, drink, and the state of your bowels; for on these three things depend, in a very great degree, your uniform health, and



exemption from this dangerous disease, puerperal or child bed fever. This fever sometimes arises, from a stoppage of the discharge which I have described to you, called lochial discharge, and from the putrid matter which I told you it was composed of, and which I directed you to cleanse;—see the head lochia. An undue secretion of milk, a stoppage of the lochial discharge, the absorption of putrid matter from the womb, exposure to too great cold or heat, all these things are capable of producing child-bed fever. This fever is extremely dangerous, and requires the immediate attention of an able physician; but, as you may be so situated as to be unable to obtain one, I shall explain to you clearly the symptoms of this disorder, and also the proper remedies.

Child bed fever comes on, with a chill in the first instance, then a flushing heat; next the woman becomes restless, and a sweat breaks out. In a short time this sweat dries up, and the skin becomes dry and burning to the touch: there is now great thirst; flushing of the face; whiteness and dryness of the tongue; great pain in the head and back; sickness at the stomach, sometimes attended with puking. In a short time the belly swells, feels full, and becomes very painful; so much so, that the weight of the bed clothes, gives considerable increase of pain. The bowels become quite loose in some cases, and in others much constipated or bound; so much so, that it is difficult to get a passage through them. By these symptoms you are to know this fever.

I must here remark, that if this fever continues for some time, it is very apt to change to a typhus fever.—When this is the case the inflammatory symptoms subside, the tongue and teeth are now covered with a dark brown coat; small sores break out in the mouth and throat, similar to those in a child that has the thrush; the breath smells very badly; the stools are dark and very offensive; and not unfrequently small purple spots appear on different parts of the body. When the last symptoms appear, the case is certainly a very doubtful one. In the typhus stage of child bed fever, refer to the head nervous fever for the remedies. The remedies in

the first stage I have described, or child-bed fever properly so called, are as follows.

*Treatment.*—While the cold stage is passing over, warm applications to the feet and legs are to be made; and, when the inflammatory or hot stage comes on, as before described, the woman is to be bled from the arm, and immediately purge freely with calomel—see table of doses. This purge of calomel, is to be followed up with a dose of epsom salts—see table. If the woman is of a full, stout, and healthy habit of the body, and the pains and fever, in eight or ten hours do not begin to give way; and if the pains in the head and back continue severe, I generally draw more blood from the arm. During this fever, obtain a phial of antimonial wine, and one of sweet spirits of nitre; mix, as you can, equal quantities of these two articles, and give a teaspoonful of this mixture every half hour, in a little water or tea; in other words, give it in such a manner as to produce a little sickness of the stomach, attended with a gentle moisture on the skin. If it be inconvenient to obtain these articles put into a pint of milk warm water, ten grains of tartar emetic, and give of this water one or two tablespoonfuls, every one or two hours, so as to produce and keep up a constant sickness at the stomach. This will lessen the fever. Rub the belly well with sweet oil, and by injecting a little up the birth place occasionally, the irritation will be greatly lessened. The application of flannel cloths, frequently wrung out of warm water, and laid to the belly, will also be highly important in lessening the pains and inflammation. Should the pain continue in the belly, apply a blister at the upper part of each thigh. I would advise blistering on the belly, that being the proper place, but then you could not apply the warm cloths, which are highly important. It will, therefore, be better to apply blisters as directed. Clysters made of slippery elm, and about milk warm, thrown up the fundament with a proper pipe, three or four times a day, will answer a valuable purpose, and be a cooling and soothing remedy in this complaint. You will recollect particularly, that in

this disease, operations must be had by the bowels, during the inflammatory period; and that when the disease changes its appearance and character to typhus, as it will sometimes do, you are to gently keep the bowels open, but not to purge, so as to weaken the patient. In this event, the continuance of mild clysters will be found truly a fine remedy. For the method of clystering, &c., see that head. When purging comes on, so as greatly to weaken the woman, which is not unfrequently the case, you are to check it by giving a clyster, made with common starch, on which hot water has been poured. This clyster must be about the thickness of gruel, and be about milk warm, in which you are to put about twenty-five or thirty drops of laudanum; it must be repeated three or four times a day, as the pain and looseness may require.

At the commencement of this child bed fever, the diet or food must be very cooling and light; but as the disease advances, and the woman becomes weaker, let the nourishment be increased; and if necessary, from her loss of strength in purging, or from other causes, or if the disease seems to be approaching to the typhus or nervous fever, the symptoms of which I have fully explained, it will be necessary to support her system, by the assistance of good wine or toddy, and such nourishing food as will support the enfeebled action of the system. In these cases, wine and barks may be given also; or camomile tea made strong, and taken cold, occasionally through the day; or, you may give a strong decoction of dog-wood bark, wild cherry-tree bark, and swamp-poplar bark, made from equal quantities of these barks boiled together and perfectly cooled, in the quantity of a wine-glassful three or four times a day. These remedies are all valuable tonics, or strengthening medicines to support the system. Remember particularly, that no tonics or strengthening medicines are to be given, until after the system has been entirely cleansed of its impurities; and also, you are most particularly to bear in mind, that tonics or strengthening medicines are never to be given, when they produce or increase fever.

*Spirits of Turpentine.*—I am induced to believe, from testimony not to be questioned, that this valuable medicine, spirits of turpentine, has not yet received the attention, or been employed sufficiently in child bed fever. So far as my studies and experience will enable me to form and deliver an opinion, I would prefer its use to that of the lancet in this fever, in the reduction of febrile and inflammatory symptoms. I have been in the practice for several years past, of using spirits of turpentine as a medical remedy, and feel no hesitation whatever in asserting, that a fair and impartial trial of it, in a great variety of cases would entitle it to rank and appreciation among medical remedies, of the very first order. In obstinate costiveness of the bowels, and when every other remedy had failed, I have frequently used it with signal success; nor is there any thing superior to it in colic, and in various inflammatory or spasmodic affections of the abdominal viscera. In enteritis, which means inflammation of the intestines; in dysentery; and in hemorrhage, which means a discharge of blood, I know from practical experience, that it is a very valuable remedy. With these remarks, which I consider amply due to the subject, I will subjoin such testimonials of the efficacy of spirits of turpentine, as will entitle it to much attention in the treatment of child bed fever.

Says Doctor Payne, in substance, pages 98-9, of the 6th vol. Medical Recorder:—"Puerperal or child bed fever, within the last fifteen years, has raged with its usual violence in many parts of this kingdom, particularly in the west-riding of Yorkshire, when but few of those attacked by it escaped. Before the publication of Doctor Brennan appeared, recommending the oil of turpentine in this fever blood-letting was usually resorted to; but, there was much less success attending it, than appears to have followed the application of the same remedy, in the cases of Doctor Campbell. After reading Brennan's work, I was very glad to try a fresh remedy in child bed fever, because I had seen so little good result from blood-letting. It is now nearly eight years since I was called to visit a female, who labored under this disease; when the surgeon, who had only seen the



patient a short time before, proposed giving the oil of turpentine, which was assented to, and given in doses of half an ounce every two hours. The effect was, a very copious discharge from the bowels, appearing to consist of a serous or watery fluid, tinged with green, in which were seen floating numerous pieces of white matter, like coagulable lymph. Soon afterwards the patient became maniacal or deranged, and continued so for several days, when her intellects were restored, and she gradually recovered.

"Since that period," says the doctor, "I have seen several cases of child bed fever, one of which had been attended by a surgeon, who had discontinued his visits. I believe she had not been bled. Her friends, seeing I had an unfavorable opinion of the case, called in a more experienced physician, and it was agreed to try the oil of turpentine as a last resource. Two drachms of it were given every two hours, which soon brought on a purging, of a matter of the like nature as before-mentioned. I have stated, in the case first mentioned, that mania or derangement of mind had taken place from giving the oil of turpentine; and the probability, is, that the largeness of the doses produced the effect, by throwing too much blood to the head. In the case I am now speaking of, two drachms only were given at a dose, and the result was, that although the patient seemed to be at the very verge of eternity, she quickly recovered."

I will give but one other case. It is one communicated to the Medical Recorder, 6th vol. page 615, by Dr. James H. Lucas, of the county of Madison, and State of Georgia. It is ably and clearly detailed, and will be highly satisfactory to the reader.

"On the 15th July, I was called to a woman who had been delivered five days before of her third child, after a lingering labor of two days and nights. When I saw her, there was a wildness of expression, and great anxiety, with considerable sharpness of the features.—Her pulse was from 100 to 120. She had a severe pain above the eyes, a hot and dry skin, and great restlessness; the tongue furred in the middle, and a red appearance of the edges. There was much tenderness of

the belly, with an appearance like a ball over the pubes. Her bowels were costive; her extremities cold, every morning about two o'clock, with a scarcity of the lochial discharge; the restlessness was also much more troublesome, in the afternoon. The child and placenta were both delivered as usual. As a preparatory means, ten grains of calomel were given, to be worked off with castor oil. This relieved her considerably, particularly her head. The next morning, the 16th, ordered her to take two tea-spoonful of the spirits of turpentine, in a solution of gum-arabic, or beaten up with the white of an egg, with a table-spoonful of castor oil in the evening to assist the operation of the turpentine. On the 17th, the tenderness of the belly had nearly subsided; the pulse was less frequent; and four more stools, of a green color and offensive smell from the oil and turpentine were voided. She was ordered to continue the medicine. On the 18th, the tenderness was gone, except on pressure; and the pulse was but 90 in a minute. Three stools had been passed of a less offensive smell, and but slightly tinged with green. The skin was much cooler than on the day before. The medicine was still continued. On the 19th, the pulse was natural, with a slight perspiration on the surface; the tenderness of the belly was entirely gone; the lochial discharge of its proper quantity and color; five stools had been voided, the two last of which were of a natural appearance; and her appetite was good. On the 20th, I found her up, quite cheerful, and free from fever or disease, and she has continued so ever since."

From these cases, which are drawn from high authorities, the value of spirits of turpentine, as a most valuable remedy in child-bed fever will probably be acknowledged by every reader of this work.

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### PROTRUSION OF THE VAGINA.

The vagina, or passage to the womb, is sometimes protruded or pushed out of its natural situation. The disease appears in the form of a soft compressible tumor

or swelling, protruded without the external passage, in some cases extending backwards, and in other cases situated on one side. It is not painful when pressed upon, and most commonly it subsides when the patient lies down, being only troublesome when she is in an erect posture.

This disease is owing to local relaxation, and there is frequently the consequence of mismanagement after lying-in.

If the prolapsed part be not inflamed, and there is little or no swelling, the tumor will be very little trouble. The part may be restored with the fingers, which, when done, the patient should rest some days, and inject into the vagina, three or four times a-day, warm vinegar and water, or port wine and water, or lead water, or solution of alum in a decoction of red oak bark or water. If the patient be weak, strengthening remedies will be required, as the cold bath, bark, rust, or tincture of steel, or tonic powders, or pills. At the same time it will be prudent to wear the T bandage. When these means fail, it is recommended to make scarifications in the descending vagina.

## FALLING DOWN OF THE WOMB.

This is a much more common complaint than the former, and takes place in women of every age, and every rank. As its name implies, it consists of change in the situation of the womb, by which that organ lies much lower than it ought to do. In some cases it absolutely protrudes entirely without the parts. The slightest degrees are styled *bearing down*; and the more violent ones, *descent* or *falling down of the womb*.

In general, the first symptom of this complaint is an uneasy sensation in the lower part of the back while standing or walking, with now and then a kind of pressure and bearing down.

If these feelings be disregarded, the complaint in-

creases, and the patient becomes incapable of making water without first lying down, or pushing up a swelling which seems to stop the discharge of urine; and if the disease continue to increase, the womb is actually forced out of the parts, and takes on the form of a bulky substance hanging down between the thighs. This extreme degree of the complaint can seldom happen, excepting in women who have had a great many children, but the less degrees of it occur occasionally in very young unmarried women.

The causes of descent of the womb ought to be known to every woman, as many of them may be avoided.—Every disease which induces weakness of the habit in general, or of the passage leading to the womb, in particular, must lay the foundation for the complaint. Frequent miscarriages, improper treatment during labor, too early or violent exercise after delivery, are in married women, the most frequent circumstances by which falling down of the womb is produced. In the unmarried, it is apt to take place in consequence of violent exercise, as in dancing, riding, &c., while out of order, a fact that ought to be impressed on the mind of every young woman.

In the treatment of this complaint, the means must be adapted to the degree of its violence. When the descent is inconsiderable, and the case is of recent date, the daily use of the cold bath, invigorating diet, very moderate exercise, and the injection of any mild astringent liquor into the passage, evening and morning, will probably prove successful. But should the disease be in a great degree of long standing, a course of tonics, with the frequent use of astringent injections, as a strong solution of alum in water, or decoction of red oak bark, must be added to the above means.

Dr. Leak advises, that after the parts are reduced, the intention of contracting the relaxed vagina so as to prevent its future descent, may be effected by the frequent use of the following astringent injection: Take of alum and white vitriol, each, one drachm; boiling water, one pound, mix and filter through paper. Inject it into the



vagina, milk warm, with a womb syringe. At the same time endeavor to strengthen the whole bodily system by nourishing diet, and tonic medicines.

When the complaint resists such remedies, or when, from its degree, it may appear necessary to employ them, the only relief which can be afforded, unless the womb become pregnant, is to be obtained by wearing an instrument called a *pessary*. It is made of wood or ivory, and if properly adapted to the passage, and of a proper construction, it can be worn without much inconvenience, and it never occasions pain. Certain attentions are, however, necessary whenever such an instrument is used. Thus, the pessary should never be allowed to remain in the passage above a few days at a time, otherwise it becomes the source of great irritation. It should, therefore, be occasionally withdrawn on going to bed, well cleaned, and re-introduced in the morning, before the patient rises. In some instances, after a pessary has been worn for several months, one of a smaller size becomes better adapted to the passages, and in other cases one of a larger size is required.

Sponges of such a size as, when expanded, fill up the cavity of the vagina, are very good *pessaries*. They support the uterus, and, by putting a string through them, the end of which is to be left hanging out of the *os externum*, the woman can take them away and apply them herself very conveniently.

To answer this purpose, a fine sponge, wrung out in alum water, may be dried in a compressed state, and cut into any convenient form, so as to be introduced as high as possible: this will act by its astringency, and by its pressure, in a gentle and uniform manner. During the use of this application, an astringent injection may be used twice a day; and the sponge tent should be made gradually smaller as the vagina contracts.

The application of the bandage round the whole belly, with a moderate degree of firmness, often gives great relief to the uneasy feelings. The T bandage has also been worn in this case with considerable advantage.

If a woman, liable to falling down of the womb, become pregnant, there is no occasion for the pessary af-

ter the third month, and by proper treatment after delivery, the return of the complaint may be prevented.

In the Edinburgh "Medical Commentaries" is the following account. A woman of singular fortitude, about fifty years of age, was much afflicted with *prolapsus uteri*. After trying many remedies in vain, and being tired out with continuance of the complaint, she at length cut into the substance of the womb with a common kitchen knife. A considerable hemorrhage ensued; after which, the uterus gradually contracted, and she had neither a return of the *prolapsus*, nor was she afflicted with any other symptoms. Having boasted of her success, many women in the neighborhood, afflicted with the same complaint, applied for her assistance, and by a similar operation, were effectually cured.

It is supposed that scarifications may succeed, instead of incisions of the prolapsed womb, and the same method of cure is still more strongly recommended in the protrusion of the vagina.

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### POLYPUS IN THE WOMB.

The vagina and womb are subject to fleshy excrescences, called *polypus tumors*, in common with some other parts of the body. These, in many cases, are soft as clotted blood; in others they resemble flesh; and sometimes they are found of a hard consistence. They are of different sizes and shapes,

The mild polypus is connected to the womb generally by a narrow neck. As it grows, the womb enlarges; and presently its mouth dilates, so that the polypus can be felt with the finger. Then it gradually descends into the passage, or, in some instances, is forced down, with pains like those of labor.

Excrescences of the womb differ from descent of that organ, in being attended with the frequent discharges of blood, and when felt, in being broad and bulky, and having no orifice like the protruded womb, and in being

easily moved or twirled around, as it were by the finger.

The cause of this complaint has not been ascertained. It is evidently unconnected with the married state, as it occurs in unmarried women; and it does not appear to attack, exclusively, any particular constitution.

No medicines have any power over this tumor, but it may be safely and successfully removed, by the application of a ligature around its neck. This operation gives no pain, and is practicable, whenever the mouth of the womb has dilated completely. But, if the symptoms be not urgent, it will be better to delay, until the polypus have wholly, or in part, descended into the passage, as the ligature can be still more easily and successfully applied.

There is a tumor of a different kind, met with in the womb, which does not spring from the surface of its cavity, but is imbedded in its substance. It forms a knob or projection, which gradually increases; and, in some instances, several of these form in succession, and the womb becomes considerably enlarged.

This tumor is called a *tubercle*. It produces very nearly the same symptoms with polypus. The distinction between this disease and polypus, can only be made by a skillful examination, which determines the point.

The growth may very frequently be checked, and in several cases its size may be even greatly diminished, by taking, for a length of time, two or three drachms of the viriolated tartar, or cream of tartar, in a glass of water, every morning before breakfast. Should this not be sufficient to keep the bowels in rather a laxative condition, its operation may be assisted by taking, at bedtime, an aloetic pill. Much advantage is also derived by the use of the warm sea bath, which, if not attainable, a little salt added to the water may be substituted. The patient must observe a light diet, and carefully avoid heating and stimulating drinks. Perhaps a mercurial course might be attended with good effects in this affection of the womb, and afterwards the nitric acid.

The possibility of removing this complaint, or of keeping it in subjection by proper remedies, and the great



probability of completely curing a polypus, by a simple operation, or of relieving by a mechanical contrivance, a bearing down of the womb, must be surely powerful inducements for women laboring under symptoms of these complaints, to submit early to a skilful examination, which can alone determine the precise nature of their disease.

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### CANCER OF THE WOMB.

This disease most frequently appears about the time when the menstrual evacuation ceases, but no age is exempted from it.

Its approach is, in general, gradual. At first, the patient feels an uneasy weight in the lower part of the belly, with the sensation of heat or disagreeable itching. By degrees irregular shooting pains, darting across the share bones, take place. The pain at last becomes fixed in the womb, and is described to occasion a constant gnawing, burning sensation. A discharge of ill-colored, fetid, acrid matter from the vagina, attends this pain; and, notwithstanding every attention to cleanliness, excoriates the neighboring parts.

The nature of cancer is not yet properly understood by practitioners; but it is well known, that the first change in the part which afterwards becomes cancerous, is a thickening and hardening of its substance. This may be suspected to have taken place in the womb, if there be pains in the thighs and back, bearing down when using exercise, and occasionally violent discharge of blood. By early attention to such symptoms, many individuals have had the progress of the disease completely arrested.

In the early stages of cancer of the womb, a continued perseverance in milk and vegetable diet, a total abstinence from animal food of all kinds, and every fermented liquor, and occasional blood-letting, and in some cases the establishment of one or two issues in the



arms or above the knees, together with frequent doses of cooling laxative salts, tends most materially to relieve the symptoms, and to retard the progress of the disease.

Pain and irritation, which strongly tend to increase, are allayed by the use, every night, of the warm bath, impregnated with salt. This soothes the part, and indeed the whole system, and contributes materially to the relief of the patient. The injection of decoction of camomile flowers into the passage, morning and evening, is always proper. Discharges of blood are moderated by rest, keeping the patient cool, and pressing a cloth firmly on the passage. Should the size of the tumor render the passage of the stools or urine difficult, it will be necessary to assist the evacuations of the former by laxatives, and to have the latter regularly drawn off. Care must be taken, however, to give no stronger laxatives than is sufficient to produce the desired effect; for frequent stools in such circumstances, give great fatigue and produce much injury.

Should there be, in the last stage, much pain or restlessness, these must be overcome by opiates. The fetid discharge is to be carefully washed away, and every attention must be paid to the mitigation of those evils and distresses connected with protracted disease.

A variety of medicines have been proposed for the cure of cancer in every part of the body. These are generally useless, and sometimes hurtful. The pretensions of emetics, and the no less injurious interference of friends and acquaintances, who have all their own mode of cure, too often deceive the patient, and prevent her from using those simple but salutary means, which at first keep the disease in subjection, or from submitting to an operation when the complaint is seated in a part capable of being removed. The only time when benefit can be derived, is thus lost, and nothing afterwards remains but to diminish, as much as possible, the misery of the patient.

## A MOLE

Is a fleshy or bloody substance contained in the womb and its size varies from that of a nut to an orange, or it may even become larger. The symptoms are very much the same at first with those of pregnancy, so that this has been called a *false conception*. However, in pregnancy the belly often becomes flat and less, until the end of the second month; on the contrary, when there is a mole, the belly increases from the first, and so continues to the second or third month, at which time it generally comes away. If it continues longer, it often proves troublesome by the flooding it occasions. After the period of four months, the mole excites no motion in the womb like those of a living child: it distends the belly equally, and changes its situation according to the posture of the mother, which is never known to happen while the *fœtus* is alive.

It is occasioned by the retention of a clot of blood in the womb after a miscarriage, a profuse menstruation, or it may follow a delivery at the full time, or may be occasioned by the retention of a blighted conception.

When a *mole* occasions no ill symptoms in the mother, no violence should be used to bring it away, but it may continue many years without creating any remarkable inconvenience. If it comes away by the end of the third month, it rarely happens that any assistance is necessary. Let the finger be gradually introduced into the womb, and if that suffice not, introduce another, and thus the *mole* will generally be excluded by the pain which attends on these occasions. The *mole* is expelled with the same symptoms as in a miscarriage, and requires similar management.

A substance of a different nature is occasionally met with, namely; a mass consisting of small bladders, called *hydatids*. These bladders, which contain water, may be very numerous, and sometimes resemble a thick cluster of grapes. Some of them are not larger than the head of a pin, others larger than a nut, or one or

two may even acquire a greater size. Generally speaking, they are produced by the retention of a blighted conception, which comes to be converted into hydatids. In this last case, the time when the embryo or *fœtus* perishes, is marked by the breast becoming flaccid, and the morning sickness going off. The belly does not increase in size, or if it does, it is slowly. The patient does not become regular, as she would have done, had the womb been emptied; but she may be subject to irregular discharges of blood. At length, after an uncertain period, pains like those of labor come on, and the mass is expelled, often with a very considerable flooding. The management is the same as in an abortion.—After the expulsion, milk sometimes appears in the breasts.

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### INFLAMMATION OF THE WOMB,

Commonly occurs about the second or third day after delivery, though in some instances later. The existence of it may be ascertained by pains in the lower part of the belly, which are greatly increased, by pressure, a constant fever, with a quick, hard pulse, and a great prostration of strength. The lochial discharge is very early suppressed, and the secretion of milk very much diminished.

It is commonly attended with sickness. It often happens that the woman can only lie on her back, and on turning to either side, she feels a painful heavy mass fall to that side, and at the same time an excessive pain in the loin, kidney and groin, of the opposite side.

Many causes tend to induce inflammation of the womb, such as abortion, difficult or tedious labor, the exhibition of heating and stimulating drinks, exposure to cold after delivery, &c.

As this disease is very rapid in its progress, it calls for the earliest attention. Blood-letting is of great importance in the incipient stage, and may be repeated in



ten or twelve hours if the effect produced and the constitution of the patient would justify it. Although strong active purges would be highly improper in this disease, yet it is necessary to preserve the regular motion of the bowels by giving, occasionally, the cathartic mixture of Epsom salts in small doses. Emollient and aperient clysters should be frequently administered, as they not only unload the intestines, but likewise act as fomentations. Medicines which determine to the surface, as Dover's powder, or diaphoretic drops, with the saline mixture, are also highly servicable.

To remove the tension, and alleviate the pain and soreness, flannel cloths wrung out in a warm decoction of camomile flowers, or any other herbs, with the addition of one-fourth of spirits, to which a little laudanum may also be added, should be kept pretty constantly applied to the lower part of the belly, and at bed time it may be rubbed with the camphorated or volatile anodyne liniment. (*See Dispensatory.*) In using fomentations, due care must, however, be taken that they are not applied so wet as to run about the bed, and thereby occasion inconvenience to the patient.

Opiates are necessary to procure rest, but they should not be employed until the inflammation has been subdued by blood-letting, and aperient or diaphoretic medicines.

Too much caution cannot be observed by women in guarding against any exposure to cold after delivery, as they are thereby apt to bring on diseases, which, if they do not prove quickly fatal, not unfrequently leave effects behind them, of which they will be sensible the whole future period of their lives.

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### DROPSY OF THE OVARIUM.

The appendages of the womb called *Ovaries*, are frequently the seat of dropsy. This disease occurs at every period of life.

It is a most extraordinary fact, that a small body, not



larger than a nutmeg, and having naturally no cavity, should by disease become so enlarged as to contain, in many instances, above ten gallons of watery fluid.

At first, dropsy of the ovarium is very considerable, and attended with no disagreeable symptoms. It increases gradually in bulk, and is originally confined to one side only, more frequently the left one. The patient enjoys usual good health, in most cases, till the tumor has acquired a considerable size; it then induces pain and numbness in the thigh corresponding with the side in which the swelling is situated, and by degrees the body becomes wasted, the appetite bad, and the strength impaired.

Nothing can be more uncertain than the progress or termination of this complaint. Experience has proved, that, under the most apparently desperate circumstances, the health has been in a manner restored, or life for a considerable time protracted; while, on the other hand, where no urgent symptoms have appeared, a sudden aggravation of complaints has occurred, and a rapid advance to the fatal termination has taken place.

With respect to the cause of this disease, nothing satisfactory can be offered. Women of every age and condition are found afflicted with it. Human prudence, there is no reason to fear, can neither foresee nor prevent its occurrence.

This disease can be very rarely cured. Our chief and most rational object is to keep it from increasing quickly. For this purpose diuretics have been tried, but they have no effect. The best practice seems to be, to make gentle pressure externally with a bandage, so as to support the parts, at the same time, that we may keep the bowels open, and use means for invigorating the constitution. Troublesome symptoms must be palliated by appropriate remedies.

When the tumor has acquired great size, and produces breathlessness and other urgent symptoms, the water may be taken off by the operation of tapping. A temporary relief, however, will only be obtained by these means, for the fluid is commonly soon again accumulated in increased quantity.

In some rare cases, where the general health of the patient remains unimpaired, by the use of strengthening remedies, the disease has been prevented from returning after tapping; and hence patients, under such circumstances, should not altogether despair.

Dr. Cutbush gives an instance of a dropsy of the Fallopian tubes, being effectually cured by the application of tobacco. (*See Materia Medica.*)

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### WORMS.

Women after child-birth, are very frequently much troubled with worms, particularly the small white worms called ascarides. These produce a very troublesome itching about the fundament or lower part of the intestines. They also occasion want of appetite, or depraved appetite, itching in the nose, pale face, irregular pains in the belly or sides, and some times a difficulty in making water. If the stools are examined, they may often be found mixed with slime, and worms can be discovered like small pieces of white thread.

The most effectual means of destroying these animals, is, to use, morning and night, as long as the symptoms continue, a clyster, composed of two drachms of aloes rubbed up with a pint of mucilage of Arabic, slippery-elm, or flax-seed, or thin gruel. If this should not answer, injections of half an ounce or more of the oil or spirits of turpentine, mixed well with the mucilage, or gruel, should be repeated twice or thrice a week.

A different kind of worm is found higher up, having, to a superficial observer, much the appearance of the common earth worm, whilst another species, namely, the tape worm, is flat and jointed. These produce, generally, more pain in the belly than ascarides, and seldom any itching about the extremity of the bowels.

The treatment is twofold, first to give calomel at bedtime, followed by brisk purgatives the next morning, which not only forces the worms away, but by removing much of the slime of the bowels, destroys their favorite and necessary habitation.

The second part of the treatment consists in giving such medicines as are supposed to kill the worms, such as the filings of tin or iron, or Carolina pink root, or pride of China. (*See Materia Medica.*)

For the destruction of the tape worm, the oil of turpentine is considered very efficacious, as also the male-fern root. The doses of the former, is from a half to an ounce given in milk, mucilage, or thin gruel. The dose of the latter, is from one to two drachms, which may be taken in the morning on an empty stomach, for two or three successive days, and the following morning after the last dose, take a dose of calomel and rhubarb, jalap or castor oil.

As an Auxiliary remedy in cure of worms, considerable benefit is sometimes derived by applying, externally, over the region of the belly and stomach, a cataplasm made of the leaves of tobacco pounded and wetted in vinegar, or one of ox gall formed of a due consistence with corn or oat meal.

These remedies have been known to succeed after powerful vermifuge medicines, internally administered, have failed to produce any good effect.

An hereditary predisposition to have worms formed in the bowels and stomach, seems to exist in some persons, as all the children of one family have been known to be troubled with them.

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## BARRENNESS.

Sterility is a misfortune few women become altogether reconciled to. In various countries and in different ages of the world, charms and spells, and powerful elixirs, have been resorted to; rich offerings have been presented at the shrine of a favorite saint; pilgrimages have been undertaken to holy wells: and, in addition to all, the virtues of potent herbs and drugs have been made trial of, for the removal of this infirmity. When we consult the writings of the old physicians on this subject, we find numerous recipes,



containing medicines sometimes of opposite qualities, and some times no quality at all. The practice of the moderns is, at least, more simple, if not more efficacious. Sterility proceeds from either a temporary or permanent incapability of conceiving or retaining the embryo, till it acquires a form. The causes producing this incapability, may consist in some malformation or deficiency of the womb, or its appendages, which cannot always be discovered during life, or in merely a weakness in the action of the womb. This last is by far the most frequent cause, and it is occasioned by local weakness of the womb, or general affections of the whole system; and is marked usually by an obstruction, deficiency, or redundancy of the menstrual evacuation, or by the complaint termed female weakness. It is very rare, indeed, for a woman to be barren, who is, in all respects, regular.

We do not, in the present age, pretend to the knowledge of any elixir or medicine, which has the specific power of curing sterility. We proceed on the principle of rectifying the constitution, where it is injured or weak, and of restoring the menstrual evacuation, to its due and healthy state. The means for effecting these purposes, must depend on the situation of the individual, and may be learned from some of the preceding chapters of this work.

There are chiefly two states of the constitution productive of those deviations in the action of the womb, which cause barrenness. The first is a state of fullness, and a disposition to obesity.

The person gradually becomes fat and inactive, the menstrual evacuation continues regular for some time; but at last diminishes, and becomes obstructed, or goes to the opposite extreme, and becomes frequent or profuse. The patient is either barren or subject to false conceptions and abortion. This state is to be rectified by spare or vegetable diet, total abstinence from malt liquor, regular and constant exercise, especially early in the mornings and on horseback, the prudent use of laxatives, and after some time the cold bath. These means will, if persisted in prudently, effect the desired



changes; but if pushed to an undue degree, and especially if repeated purgatives, and much vinegar, or great abstinence be resorted to, the health may be completely ruined.

The second state is that of relaxation, the habit is spare, instead of corpulent; the mind is lively, and, perhaps, even irritable; the menstrual evacuation either profuse, or it recurs too frequently, and at times clots and shreds are discharged.

This requires a different treatment: the diet, if not usually nutritive, is at least not to be sparing, the exercise must not be carried to the length of fatigue, the cold bath is useful, and strengthening medicines are required.

Such remedies as have been pointed out for the removal of irregularities of the menstrual evacuations, or of fluor albus, must be employed when necessary.

By persisting in a proper plan, sterility may at length be frequently removed—there are many instances of women bearing children, after having been several years barren.

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### SORENESS OF THE NIPPLES.

The nipples, from the delicacy of their structure, are very liable to be injured by the action of the child's mouth in sucking, along with the irritation which the stagnant milk occasions, unless they be kept very dry. Women are subject to this complaint more frequently while nursing their first or second child than afterwards; for the nipples lose much of their sensibility by use.

In the treatment of this disease, the great object to be attended to is, to remove, as much as possible, every circumstance which can tend to irritate these parts. It is important to keep the nipple dry and cool, for which purpose rings of lead are generally worn. The nipple ought to be washed frequently with some gentle stimulating liquor, as brandy and water, or port wine, or a

solution of alum or white vitriol, in the proportion of fifteen or twenty grains to four ounces of water: these must be frequently varied, for the same lotion soon looses its effects. A saturated solution of borax, in vinegar, or water, with the addition of a little honey, has been very beneficial to sore nipples.

In obstinate cases, the sores should be touched by means of a fine hair pencil, with a solution of blue vitriol, or the following liniment, which is highly extolled by Dr. Hamilton. Take of litharge and vinegar, each, two drachms, olive oil, six drachms, to be made into a liniment by rubbing the whole together in a mortar until it becomes of a flesh color, and the consistence cream. Washing the sore nipples with a decoction of the roots of wild indigo, (*see Materia Medica*,) is also celebrated as a valuable remedy in these affections.

As long as we are under the necessity of applying any medicines to the nipples of the mother, it will be prudent not to suffer the child to suck her. Where this cannot, however, be dispensed with, the part should be well washed with a little warm water, each time, previously to giving the child the breast.

To prevent the sore from being aggravated by sticking to the woman's cloths, a little cup made of wax may be laid over the nipple, which is the part most apt to suffer. If only one nipple be affected, the child may be confined to the other; but if both be affected, and the pain occasioned by its sucking is too great to be borne, the woman must then desist from the duties of a mother until the excoriations are somewhat healed, taking care, however, to have the breasts drawn regularly twice or thrice a day.

In many cases where the woman has never nursed before, the nipples at first are not sufficiently prominent to afford a proper hold for the child. In such cases the breast should be fomented by flannels dipped in warm water, and then, by gentle pressure on the sides of the breasts with the hands, the milk is pushed forward.

At the same time the pressure is made, the nipple should be drawn out by a breast-pipe, and the instant the glass is removed, the child being put to the breast,

will keep it out by sucking until satisfied. After the operation has been repeated two or three times, the child, except in extraordinary cases, will find no difficulty in sucking.

Those who have been subject to sore nipples, should endeavor to diminish the sensibility of these parts, by applying to them, for several weeks previously to delivery, cloths dipped in alum water, in strong spirits, or in the pickle of salted meat boiled, which latter has been recommended as an infallible specific for that purpose.

When little sores appear in the brown circle surrounding the nipple and correspond with similar appearances in the child's mouth, or other parts of the body, there is just cause to suspect some latent poison lurks within the system, which, it is more than probable, it will require a mercurial course of medicine to subdue.

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#### DELIRIUM,

*Or wandering of the mind*, seldom occurs sooner in lying in women than eight or ten days after delivery, and sometimes not for a much longer time. It makes its appearance very suddenly, the patient not unfrequently awakening terrified from a dream, or all at once she breaks out in some absurd or furious conduct.

There is often very little increase of heat of the skin, or other appearance of fever; though in some instances there is considerable heat; and the pulse is very quick, and this is especially the case where there has just been some strong exertion, or much speaking. But, as in all other cases of nervous constitutions, the state of the pulse is subject to considerable and sudden variations.

The patient is usually extremely talkative, and sometimes speaks with wonderful volubility. In some cases one idea seems to possess the mind; and in others the object of apprehension or consideration is rapidly varied. She can, however, for a short time be commanded, and at times, at least, appears perfectly sensible of what is going on beside her. It is not easy to say what



cause produces this disease, for it does not appear to be connected with a tendency to mental derangement in other circumstances. It is, however, a curious and an important fact, that sometimes suckling the infant produces melancholy, or other mortifications of this complaint.

When delirium accompanies the milk fever, or the weed, it is only a temporary symptom, and ceases upon the original diseases being removed. When it is the effect of phrensy, the treatment consists in those means as advised under the head of inflammation of the brain. But when it appears to be dependent on nervous irritation, the most successful mode of practice is, shaving and blistering the head, keeping the bowels open by cooling laxatives, determining to the surface by the diaphoretic powders or mixture, and afterwards allaying irritation by the camphorated mixture in their usual doses.

If these remedies prove of no avail, the most soothing mild conduct towards the patient ought to be invariably pursued, and the suitable means to promote general good health are to be adopted. The woman should be carefully watched, and never left alone. The recurrence of this disease, in cases where it has formerly taken place, may be prevented by pursuing steadily such measures as shall remove the increased susceptibility of impression which follows delivery, and by guarding against all exciting causes.

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### MILIARY ERUPTIONS.

These certainly originate in a child bed state from improper treatment; for whenever a woman in such situation is confined within a heated room, oppressed with a great quantity of bed-cloths, and forced to drink stimulating liquors, with a view of promoting a sweat, according to the absurd and pernicious custom in the treatment of lying-in patients, she is generally seized with rash fever. (*See Miliary Fever.*)



To conduct the patient with safety through the disease, we must have recourse to some opening medicines, and afterwards restore the strength by the use of Peruvian bark, elixir vitriol, and other tonics. Where the rash suddenly recedes, it will be necessary to have recourse to cordials and diaphoretics.

Affections of this kind may, in general, be avoided by attention to diet, by keeping the patient's bowels in a good state, and by admitting a proper ventilation through the chamber.

## DISEASES OF CHILDREN.

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Surely there can be nothing more painful and distressing to a mind of sensibility, than to be compelled to witness, in very many cases without being able to relieve, the various and often fatal diseases to which infants are liable. That most of them are of a morbidly irritative character, is probably well known to every physician who has attended to their symptoms but what it is that particularly excites this diseased irritability in the intestinal canal, it would probably be difficult for even the most learned and skilful of the profession to determine.

The foolish and dangerous custom, of giving infants medicine the moment they are born, in order to keep them quiet, is a practice which ought always to be discountenanced, as laying the foundations of many disorders, sometimes destroying life itself, or entailing upon the constitution maladies which last for life. Various medicines are given to infants, for very foolish and frivolous reasons, which had better be let alone entirely; such, for instance, as Godfrey's cordial, Bateman's drops, &c., &c., all of which contain opium, and do inconceivable injury to infants. I do not mean by these remarks, that these medicines are not sometimes beneficial; but to be constantly administering them on all occasions, and for nearly all possible purposes, must convince any person of common sense, that they are injurious both to the health and the constitution. By suckling infants, then feeding or rather suffering them, and then following up both by medicines, to keep them quiet, their tender stomachs are kept constantly loaded; and if they are not fortunate enough to puke up part of what they have been compelled to swallow, fermentation must

and will take place, the stomach being unable to master such a mass, followed by colics, and purgings. The above remarks are made in terms thus plain, that they may be distinctly understood by my readers. and that they may profit in the treatment of their infant children, by their true meaning.

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## STILL BORN.

When an infant is born apparently dead, or giving no signs of life, it is said to be still-born. This appearance, however, should not prevent the midwife from making every possible exertion for the restoration of the child; by patience and perseverance, thousands of infants have been restored to life. If no pulsation of beating can be felt in the navel-cord, and if there be marks of putrefaction and decay, I need not tell you that all your efforts will be fruitless. The infant, in this case, where there is no hope, ought to be separated from the mother as early as possible, and wrapped in a blanket made warm by the fire. As soon as after this, its breasts are to be bathed in warm spirits, at the same time that you gently apply to its nostrils spirits of hartshorn. If these remedies fail to restore the circulation, put it in warm water, keeping its head in such a position as to prevent suffocation. You may loosen the string on the navel-cord, so as to let it bleed about a tea-spoonful, when it must be again tied. While these measures are in operation, you are to prepare a clyster, made of a table-spoonful of spirits of any kind, and three table-spoonsful of warm water; and if the child does not breathe, you are to give this clyster up the bowels with a proper instrument—look under the head clystering. The lungs are to be filled with air, by means of a common syringe, the pipe of which is to be introduced into one nostril, while the other nostril and mouth are to be carefully closed; when you are then by gentle pressure on the breast of the child to empty them: in this way the lungs are to be frequently filled and compressed until natural

respiration or breathing takes place. Sometimes the application of a little cold water to the chest will restore children. In many instances, when the slightest action of the heart has been perceived, it would be advisable to keep up a friction or rubbing over the body, for at least an hour. Cases are stated, and many of them, of infants still-born being restored by warmth and gentle rubbing, even when no signs of life had appeared for an hour or more after the birth. This should therefore encourage you to persevere, by every possible method, for the restoration to life of a still-born infant.

There are instances, in which the child is born of a dark purple cast, in which the breathing is scarcely perceptible, and where death ensues in a few moments. When these appearances take place, the infant has generally some defect in the formation of the heart and lungs. Doctor Hosack advises, that a bath be made of oak-bark, four ounces of which is to be boiled for a few minutes in about two gallons of water. When this bath is prepared, add to it a pint of spirits of any kind, permitting it to become pleasantly warm, bathe the child up to the neck in this water. If it is convenient, you may add to this bath occasionally, a table-spoonful of spirits of hartshorn, so as to render it stimulating. When the child shows symptoms of recovery, take it out of the bath, and wrap it in warm flannels; and should the infant be taken in the same way again, you must immediately make use of the bath, after again warming it.

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#### TREATMENT OF NEW BORN INFANTS.

According to the old custom, the moment the child was separated from the mother, it was plunged in warm water, or washed with spirits of some kind, and well rubbed with a towel, to remove the mealy matter which adhered to it, and to prevent its taking cold, or perhaps to harden its skin. These foolish and dangerous practices, have caused the death of thousands of infant chil-



dren, or produced some other consequences highly detrimental to their constitutions. The consequences always are, that by washing and rubbing the child, you irritate and inflame the skin, which is at this time so tender, that nature, in her wisdom has covered it with this mealy matter, to defend it from injury in entering the world, and to preserve it from irritability and inflammation afterward.

An infant born in the winter season, has more of this mealy covering than if born during the summer; it is also more thickly covered with it at the arm-pits, the bends of the joints, and so on, which are more likely to rubbing of frictional injury during labor, than other parts of the body; and, in addition to these considerations, this covering is intended to protect the infant against the action of the atmospheric air. This covering is perfectly natural, and should always be permitted to remain until nature herself removes it. This will be done in a day or two, without assistance or artificial means by which the skin will be left white, soft, and beautiful, and the child exempted from innumerable diseases—diseases, which by the old custom of washing and rubbing would almost invariably ensue. By the old custom, the skin is greatly irritated and inflamed, then becomes of a dark red color, and afterwards breaks out with those eruptions or pimples, which usually appear on children, called red-gum.

Every person of common sense must know, that the application of spirits of any kind, especially when rubbed on the head and body of a grown person, will producing smarting and give pain. Now, I ask, what must be the consequence to an infant, whose skin is so delicately tender, that nature herself has shielded it from the atmosphere, until it will bear the change without injury. In many cases of grown persons, the application of brandy to the head, and washing the body with it, have been known to produce inflammation of the brain, or lungs, or bowels; the evaporation from the surface being so great, as to induce a degree of cold sufficient to stop the perspiration or sweat. In infants, this evaporation produces inflammations of the bowels, or of the

lungs, and sometimes of the membrane which line the nostrils, by which the child is afflicted with a disease called the snuffles.

The proper plan, and the one now practised in the different lying-in hospitals throughout Europe and the United States, is simply the following. Cleanse the face with tenderness and caution, with a little milk and water made pleasantly warm; then cover the body with thin muslin, over which is to be put the flannel. In a day or two, the mealy covering with entirely peel off, and nature in due time, will exhibit a healthy, delicate, and beautiful skin, free from every disease, and entirely exempt from all those painful and eruptive diseases to which infants are usually subject, from the old method of treatment.

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### MECONIUM.

When a child is first born, its bowels are filled with a dark colored greenish matter, called by physicians meconium. In a short time after its birth, or as soon as it commences sucking the first milk from the mother, which milk seems by nature to be intended to remove this dark colored or greenish matter from the bowels, for it is almost immediately discharged by a stool. This is the reason, I think an amply sufficient one, why children should be put to the breast as early as possible after the birth. Sometimes the milk in the mother's breast is rather slow in coming; or from some particularly cause, the child will not suck the breast, and consequently it will not discharge by stool, this matter from the bowels which I have described. It will then be necessary to give it something to open the bowels, such as a little molasses and water, which should be given frequently until the bowels are properly opened. Or you may obtain from any doctor's shop a small piece of manna, about the size of a walnut, and dissolve it in a gill of boiling water, and when it becomes cool, give the infant a tea-spoonful frequently, or until it operates fre-

quently. Or you may, if these remedies fail, give a teaspoonful of the best castor oil, which will remove the meconium immediately. The two first being the most simple remedies, should always be used first. Sometimes, but the cases are not frequent, this necessary discharge is prevented from passing, owing to the fact of the fundament, from some defect or other cause, being stopped up. Such cases require the immediate aid of an able physician, to examine and remove such difficulties or obstructions.

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### ORIGINAL IMPERFECTIONS.

Immediately after the birth of an infant, examine its body and limbs, and particularly its private parts; because children are not all born perfect in these respects. The passages of infants are sometimes closed up with slime or tough matter, which require the aid of surgical operations to open them, before they can pass either their stools or their urine. Great care and attention ought always to be paid by parents to these examinations.

Ruptures are very common among new born infants, particularly about the naval. When these ruptures are very early observed, they may speedily be removed by bathing the belly frequently with cold water, and attending to the child's bowels; in other words keeping them regularly open. If the rupture should be at the naval, apply a piece of adhesive plaster, so as to give support to the parts; but by no means apply a bandage, which will do injury to the delicate and tender parts by the pressure. The fact is, that the constant application of cold bathing, as the infant advances in age and strength, will always remove these early ruptures.

*Tongue tied.*—In this case, the tongue is confined to the roof of the mouth, by a small cord, which prevents its motion. Sometimes, indeed, the tongue is so confined that the infant cannot suck. But, I have sometimes known children cut for it for where it did not exist; there-



fore great caution ought to be used in this operation although it may be a very simple one. If the physician, or other person, who cuts this small cord, does not understand it properly, or does it carelessly, so great a quantity of blood may be lost as to prove fatal to the child. As many women are very uneasy, respecting their children being tongue-tied, I will inform them that they are often alarmed unnecessarily, and have their children operated on when they are not tongue tied. A very simple method of discovering its situation is, by putting the end of your finger in the child's mouth; if it is able to clasp it with the same force it would the nipple, or the end of the tongue moves, it does not require cutting.

*Hare lip.*—There are different kinds of hare lip, distinguished under the names of single and double hare lip—and not unfrequently, both lips are disfigured by the opening or space extending along the roof of the mouth. When this is the case, it has a very unsightly appearance; and the operation of closing the lip cannot be performed, however skilful the physician, with any probability of success. But where there is only a single opening, or even double, provided it does not extend to the roof of the mouth, as I have described, the cure or operation, can be performed without much difficulty.—You will bear in mind, that an operation, which means endeavoring to close up the lip, ought never to be performed on an infant, until it is a year old; it requires strength to bear the operation, by which it is to be removed. In some cases, but they are very rare, the infant is unable to suck; if this is the case, the operation may be performed; but at this early stage, I should consider the success very doubtful. The method used in the country of sewing it up, is highly improper. The operation to be performed in closing up the lip, where the fissure or opening does not extend beyond the upper part of the gum, is as follows:—At any silversmith's shop have two silver pins made, something longer than a common pin, and without any heads to them. With a sharp knife pare well the edges of the opening; then with one of these pins, pierce the lip at the upper side



entirely through, in a slanting direction; then pierce through on the other side in the same way. You will recollect to take a good hold, so that it will not easily tear out; then with your thumb and finger close together the edges that have been cut; now you are to wind tight round these pins some silk, which has been properly waxed, so as to draw it together that it may heal. In six or seven days, or perhaps earlier, it will heal or adhere together: then draw out the pins, and dress it with any simple ointment or salve, and if properly performed, the scar in a few days will scarcely be perceptible.

*Club feet.*—Infants are sometimes deformed, by what are called club feet; if this is permitted to go on, without immediate attention, the deformity will be very great, and cannot be removed after the infant is a few months old; the bones of the feet become hard and firm, whereas, at an early age, or immediately after birth, they are in a soft grisly state, when, if proper means are used, the foot or feet, by gradual compression may be reduced to their natural form in a few months, if the deformity is not great: but in some cases a longer time will be required.

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## THE SNUFFLES.

The stoppage of the nose is quite common to young children. It frequently prevents them from breathing freely, and they cannot suck or swallow without considerable difficulty. This is quite a simple complaint, which will be speedily removed by giving the infant a purge of castor oil; about a teaspoonful is the dose; and bathing its feet or body in warm water, pleasantly warm; and for a few days keeping its head a little warm. A little lard or sweet oil may be rubbed upon the nose and around the nostril.

## THE RED GUM.

The red gum breaks out in small pimples on the skin, generally of a red, but not unfrequently, of a yellow appearance. This complaint appears principally on the face and neck; but it sometimes breaks out on the hands and legs, and the pimples contain, not unfrequently, a white clear matter. It would be highly improper to use any means outwardly to remove it, for by so doing, you might suddenly drive in the complaint, and thereby destroy the life of the infant. The child, while laboring under this disorder, should be prevented from being exposed to the cold air. The only danger in this disorder is in driving it in; when this is the case, the infant is greatly distressed in the bowels, screams and cries constantly; and not unfrequently has fits. In the management of this disorder, you are to keep the infant's bowels open with a little magnesia and rhubarb; for the dose of either of these medicines, see table; or a teaspoonful of castor oil may be given. Should the disorder suddenly disappear, and the child become sick from it, put it immediately in warm water, and give it one or two drops of antimonial wine, in a little sage tea. This may be repeated every hour or two, until a moisture on the skin is produced, and the pimples or eruptions brought out again on the body.

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## YELLOW GUM.

This is a disorder similar to the jaundice, and takes place with some infants a few days after their birth; it is known by a yellow tinge of the skin, high-colored urine, and a constant desire to sleep. This simple complaint can be removed by a gentle puke of one or two grains of ipecacuanha, mixed with a little warm water, and in a short time followed by some mild purge.

## THRUSH.

The thrush or sore mouth is a very common disease in early infancy. The child suffers a great deal of pain in sucking, and frequently this complaint is attended with some fever. This disorder appears in small white spots on the tongue, corners of the lips, and inside the cheeks, and by degrees spreading itself over the whole inside of the mouth and throat; and, in some cases, extending down through the stomach and navel. If the white spots on the tongue resemble coagulated milk, or in other words, look as if the child had been eating curds, and that some of them remained sticking on the tongue, you will know by this appearance, that the thrush or sore mouth is commencing. The thrush is produced from acidities in the stomach and bowels, occasioned from some particular quality of the milk; which disagrees with the infant, or from improper food. Those children who are raised by hand, are most subject to this complaint, which shows plainly, that it is the food which disagrees with the stomach and bowels, and brings on the thrush or sore mouth. The remedies are then very plain and simple; attend to the stomach and bowels first, before you use any astringent washes; after which it will be proper to use a wash for the mouth, made of a little borax, honey and alum, dissolved or mixed in a small quantity of sage tea. Then with a rag tied to a stick, rub or wash the mouth with this preparation, two or three times a day; regularly persevering in washing while any appearance of the disease remains. To regulate the stomach and bowels, give equal quantities of magnesia and rhubarb; for doses of either of these medicines refer to the table.

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## CONSTIPATION.

Constipation means costiveness, or being bound in the body, so that the infant cannot pass its stools. This

complaint is sometimes hereditary, or natural to the child; when this is the case, and it does not exceed proper bounds, it may not require the use of any remedy; but should the infant's health begin to suffer, from frequent attacks of colic, flatulence, &c., it should be strictly attended to, as it may produce convulsions or fits, inflammation of the bowels, or other diseases of a difficult and lingering nature, thereby establishing this costive habit of body for life.

If the predisposition descended from a mother of the same habit, or in other words, if the mother herself is subject to being bound in her body, the child may be relieved for a short time, but it will again return. When this is the case, the mother, if possible, should change the quality of the milk, by being attentive to her diet, and to take occasionally some mild purge, which will alter the quality of her milk; for this purpose there is no medicine superior, or more innocent than magnesia and epsom salts, of equal quantities, mixed and ground very fine in a mortar. Of this take a teaspoonful or two in a tumbler of cold water of a morning on an empty stomach. When the constipation originates from the child's food, it must be changed, and simple medicines given occasionally, to act as a mild purge, such as magnesia, rhubarb, manna, sweet oil, or castor oil; either of these may be given; for doses of either of these medicines, see table. But if the costiveness is obstinate, a little aloes pounded fine and mixed with honey or molasses, will produce a passage or stool. Or you may give a laxative clyster, made of a little warm water, in which put a teaspoonful of lard, and with a clyster pipe or syringe, throw or squirt it up the fundament. In administering clysters, you are to recollect, that they should not be given hot, but milk-warm; by giving them hot, you increase the disorder, and do serious injury to the child; this is a mistake which is often made, and the consequences both to children and grown persons when clysters are given hot, is extremely dangerous. For directions as to clystering, look under that head



## COLIC.

Whenever the child cries, the general practice is to suckle it, or feed it, by which its little stomach is kept constantly loaded, and being unable to digest the food, colical pains, griping and purging are the consequences. The suffering of the infant in such cases being very acute or painful, recourse is had to Bateman's drops or Godfrey's cordial, and some use laudanum or paragoric, all of which contain opium, and relieve the little sufferer for a short time; when the colic or griping again returns.

"From my experience in the diseases of infants," says a distinguished writer in the *New York Medical Enquirer*, "I am satisfied that these complaints, if not produced, are nevertheless cherished by the causes already mentioned. I have in my practice, been in the habit of administering ipecacuanha in the dose of one grain, so as to produce puking in imitation of that excited by nature; and I am happy in saying that in no instance did it fail to produce the desired effect; that in some obstinate cases, it has acted like a charm, and that the parents declared it must have contained opium.

"In cases of griping, or violent pain in the bowels of infants, I have also found the application of the following anodyne plaster to the abdomen or belly, highly beneficial:

"Take of gum plaster three drachms; camphor, half a drachm; opium, twenty grains; oil of aniseed, ten drops; to be made in a plaster and spread on "soft leather."

"Professors Meyer and Reich, of Berlin, employs as a principal remedy in cases of bowel complaints of children, one drachm, of the diluted muriatic acid, in three ounces of simple syrup, of which they direct a teaspoonful to be given about every two hours."

One of the best things for colic in young children which I have used for many years is a strong tea made of aniseed and sweetened with loaf sugar; let the child

be given a few teaspoonfuls of the tea, and it will be found to be more effective in relieving this form of gripes than laudanum or paregoric; which, by the bye, I think injurious to the bowels of children.

Colic generally takes place in early infancy, from the first six weeks, to the tenth or twelfth month; and is easily known by the infant's suddenly screaming or crying, and at the same time drawing up its legs; if the complaint is severe, the child cannot urinate or make water. If the colic is slight, and arises from flatulence or wind, give one or two drops of peppermint, to which if necessary, you may add a drop or two of laudanum; at the same time expose the infant's belly to a warm fire, and rub it with the following mixture:—Take three table-spoonfuls of spirits, in which camphor has been dissolved, add to this a teaspoonful of laudanum, and bathe the child's belly with it. You will also find the application of warm salt, or bathing it in warm water, valuable remedies.

When the colic originates from acidity, as may be known by the bowels not being bound, and the stools of a green color and sour smell, in addition to the above means, you should give occasionally a dose of magnesia—see table for dose; this will correct the acidity, and assist the discharge of the offending matter from the bowels. You will find the infusion of rhubarb, in small doses, given so as to keep the bowels gently open, whilst at the same time it communicates tone to the stomach and bowels, and increases the peristaltic action. The infant must be kept warm, and a flannel be applied round the belly, which gives support to the muscles, and is a valuable assistant in diseased conditions of the intestinal canal.

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#### SORE EYES.

Sore eyes are very apt to make their appearance a few days or weeks after the birth of the infant, which

occasions it to be fretful and uneasy, and sometimes if neglected, may produce blemishes or blindness. It is often brought on by exposure of the infant to large fires, or the imprudent practice of holding it to a lighted candle to keep it quiet. It is also caused by cold; and when the eyes are sore at a more advanced age, it may be produced by cutting teeth. The remedies are, to avoid cold, and exposure to too much light, particularly the fire; bathe the eyes three or four times a day in cold water, or make the following preparation with which you are to bathe the infant's eyes frequently through the day; about the size of a common pea of sugar of lead, dissolved in a pint of cold water. If this should not relieve it, give it a purge of castor oil. The application of the lead water as mentioned, is generally successful, and a valuable remedy.

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### TEETHING.

Children suffer a great many complaints, during the time of cutting teeth. Some infants suffer much less than others; but all seem, during this necessary operation, to undergo pain and a disordered state of the system.

The symptoms which go before and accompany the cutting of teeth are more or less violent, according to the manner in which the teeth come through the gum, or in other words, the resistance which the gum makes; and to the irritability of the infant's constitution, &c.

When the child cuts its teeth in the most easy manner, the pressure on the gums, however slight gives pain, and produces an increased flow of the fluids furnished by the mouth; the child is fretful and restless during the night, is constantly putting its little hands on any thing that it can get hold of, into its mouth. The spittle which it is constantly discharging or slobbering from the mouth, when swallowed, produces sickness, gripes and looseness; after a short time, the corner of a tooth is

perceived; but the pain and uneasiness still continue for several days, when a second tooth is cut.

During the time between the cutting of the lower and upper teeth, the child generally improves in health and strength: but in a short time is again subjected to the same uneasiness. In strong, healthy, or fat children, a fever generally, and that sometimes violent, comes on before, or about the time of cutting every tooth; the gums are swelled and inflamed, the eyes much disordered, the belly bound, the skin hot, and the child cries constantly, and sucks with much pain; sometimes it is unable to suck, and its sleep is very much disturbed. Weakly and delicate children, where teething is painful and difficult, lose their color, fret constantly, vomit or puke frequently, attended with looseness or purging, and become quite emaciated, or in other words, reduced to great weakness. I have discovered that those children I have last mentioned, pass through the painful and dangerous process of teething, much easier, and with greater safety than those who are fat and robust: and have particularly remarked, that those children who slaver (vulgarly called slobber) most cut their teeth with the greatest ease.

The treatment during teething, should be a particular attention to the bowels, by keeping them sufficiently open; always paying due attention to every circumstance likely to promote the general health of the child, such as pure air, exercise, strict cleanliness, food easily digested in the stomach, and taken in small quantities. As the difficulties sometimes are generally lessened, and frequently entirely prevented, by a looseness coming on spontaneously, or more plainly speaking, of its own accord, it must not be checked, particularly in children of fat or full habit, but permitted to go on, unless it weakens the infant too much, or runs to excess, when it may be stopped by degrees. But if the child is bound in its body, you will recollect that it should take some laxative purges, so as to produce two or three stools daily for this purpose, give two grains of calomel, to which add three or four grains of rhubarb or magnesia. If necessary the operation of this medicine may



be assisted by clysters,—for directions, &c., as to clystering, look under that head. When fullness and quickness of the pulse, increase of heat, flushed face, frequent startings, oppressed breathing, immoderate fits of crying, &c., denote fever; the irritation on the gums must be removed, which is done by cutting or lancing the gum down to the teeth, for which purpose, a gum lancet must be made use of.

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CONVULSIONS, OR FITS.

Convulsions or fits, are at all times alarming and dangerous, and require a very great variety of treatment; therefore, procure in such cases a skilful physician. But as these fits are frequently very sudden, I shall direct the means which may be used before a physician can be obtained, and I will make some observations as to the general causes which produce them. It is not unfrequently the case, for convulsions or fits, to come on suddenly, in others, the attack is gradual, and the symptoms so slight as to pass unobserved by the mother or nurse. In the former, the child, from being in the most perfect health, turns of a purple color, the features and eyes are changed, and the whole frame is violently convulsed or agitated. In a short time these symptoms are followed by faintings, or medically speaking, by a suspension of the vital powers; after which, the child gradually recovers, but for some time, remains stupid and drowsy. In the latter cases, the infant shows uneasiness, changes color suddenly and frequently, the lips quiver, the eyes are turned upwards, and it stretches out, the hands become clenched, when the convulsion or fit comes on.

Fits are apt to be produced by any thing which affects the whole nervous system, or that which produces irritation of any particular nerve; and by the sudden striking in any of the eruptive disease, such as the measles, or any complaint which breaks out of the skin; from improper food, or irritating substances applied to

the stomach or bowels will produce this disorder. These convulsions frequently occur during the period of teething; but I have found from particular attention to the causes which produce convulsions or fits, that worms are very often the cause of this complaint. But if they take place frequently, and with great violence, occasioned from pressure on the brain, or any cause in that organ, they generally terminate fatally, or cause the child as he advances in years, to become foolish.

The treatment of convulsions or fits must depend on the cause which produces them. If the sudden striking in of any of the complaint, as the rash, the measles, &c. or the drying up of any eruption or discharge on the body, it ought to be brought out by putting the child into a warm bath, then giving a dose of Godfrey's cordial or Bateman's drops, so as to produce to the surface, the complaint; if indigestion or improper food has occasioned it, give a gentle emetic or puke of ipecacuanha, or emetic tartar—see table for dose. If the bowels are stopped, or the first are supposed to arise from irritating matter of any kind in the body, it must be removed by purgative medicines, as two grains of calomel, mixed with five grains of rhubarb or jalap, which, if necessary, assist with a clyster—for the method of preparing and administering a clyster, read under that head;—but if produced by teething, then scarify the gums, or in other words, cut them down with a lancet immediately over the tooth; this operation ought to be performed daily, until the tooth is through the gum, or the fits cease.

When worms are suspected to be the cause from which the convulsions or fits are produced, the remedies, recommended under that head must be employed.

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### CROUP.

This is a very dangergus complaint, and the rapidity with which it proceeds, requires prompt and immediate attention, or the disorder will prove fatal in a short

time. Of all the diseases to which children are liable, croup is certainly the most dangerous. Every mother should understand the symptoms and treatment of this disease; as in many instances, before a physician can possibly be obtained, suffocation is the consequence. The croup comes on with a difficulty of breathing and wheezing, a short dry cough, and a rattling in the throat when asleep. In a short time the difficulty of breathing increases, the face of the child is flushed, and the veins in the neck are very full of blood, and throb or beat very fast. The voice and coughing has a strange sharp sound, something like the crowing of a young cock; the child is very restless and uneasy, the body is hot, and attended by great thirst, and the pulse very quick. Those in whom the face is much flushed, seem overpowered by a heavy sleep, from which they are roused only by the violent fits of coughing. As the disease continues, the fits of coughing return more frequently, and are attended with an uncommon degree of agitation through the whole frame; the breathing becomes more and more noisy, and unless relief is speedily obtained, the infant will die by suffocation.

The remedy is an emetic, or puke. The moment the complaint is discovered, put six grains of emetic tartar into six tablespoonsful of warm water, and give the child about half a tablespoonful every ten or fifteen minutes. The intention is, to keep up a constant sickness and vomiting or puking. But if it is a violent case, you are to bleed it from the arm, and put it up to its neck in warm water. But recollect you are to keep up the sickness at the stomach, and puke it freely. I have frequently, when the croup was severe, kept the child puking occasionally, through the whole night, and using now and then, the warm bath, before relief could be given. In this complaint you will find the seneka root a valuable remedy; it must be given to the child frequently, made into a strong tea. The tincture of bark also will be found to be a very useful remedy; or bark and Virginia snake root, boiled together very strong, and when cold, let the child take a teaspoonful every half hour. Tincture of castor and laudanum,



given from six to twenty drops, according to the age of the patient, will be found to be an excellent remedy, in what may be termed the *spasmodic* stage of this complaint.

The following simple remedy is highly recommended by Dr. John D. Goodman, an eminent physician of Charlottesville, Virginia. The simplicity of the remedy, and the facility of its application, entitle it to a trial.

“Whenever children are threatened with an attack of croup, I direct (says the Doctor) a plaster covered with dry Scotch snuff, varying in size according to the age of the patient, to be applied directly across the top of the chest, and retained there until all the symptoms disappear. The remedy is found to be always effectual when applied to the first and second stages of the malady. This mode of treatment was from prejudice, neglected by me, and in one instance, in which, with very considerable difficulty, one of my children was rescued by the ordinary treatment. But on being urged to make a trial of the snuff plaster, I determined to make the experiment, whenever opportunity presented. This was not long wanting; and when called to a child laboring under all the symptoms of the early stage of croup, such a plaster, made by greasing a piece of linen, and covering it well with snuff, was directed to be applied to the chest. The event was most happy, the symptoms of irritation, and half crouping cough, ceased shortly after; the child fell into a profound sleep, with gentle perspiration, and by next morning, was free from all distressing symptoms. The plaster was applied for a night or two following, and then discontinued.— Since that time, my family has been saved from a great deal of anxiety and alarm, to which previously they were subject, as we were obliged to keep Cox’s hive syrup, tartar emetic, and all other articles resorted to, constantly ready to meet the attacks of the croup, which were very sudden and frequent in cold wet seasons.— Since then, we have found nothing necessary but the snuff plaster. If a child is heard to breathe hoarsely, or cough with any of the dreadful ringing sound of croup, it is only necessary to apply the snuff plaster,



and we feel under no further anxiety. Instead of being obliged to watch with the child all the rest of the night, when once the snuff is applied, we go to rest again, with a feeling of entire security, which we have never had the least cause to regret."

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### FEVER OF CHILDREN.

The various complaints to which children are subject, being, as I have before mentioned, of an irritative nature, will generally produce fevers, and although severe while they continue, are not frequently productive of danger, if properly managed.

A disordered state of the stomach and bowels, teething, exposure to cold, striking in of any eruption, and in short, every thing which can excite an increased action in the heart and blood vessels, will produce more or less fever. The treatment of these complaints has already been described. When these fevers take place, cleansing the stomach and bowels will be proper, for which purpose, give an emetic, or puke, followed by two or three grains of calomel, to which add four, five, or six grains of rhubarb; — for the dose of either of these medicines, see table; after which, Bateman's drops, Godfrey's cordial, or paregoric, at the same time bathing the child in warm water, will greatly facilitate in lessening the irritability of the system, and removing the fever.

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### SCALD HEAD.

This complaint begins in brownish spots on the head, and in a few days forms a scab, and discharges a thick gluey matter, that sticks among the air. The sores gradually increase, until the whole head is covered with a scab, discharging this matter, which is very offensive. You are to cut off the hair as close as possible, and

wash the head well every night and morning with fresh lime water. This is easily prepared, by slacking a piece of quick lime, of the size of a hen's egg, in a quart of water, and when settled, pour the liquor into a bottle, and keep it corked for use.

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### CHOLERA INFANTUM, OR, PUKING AND PURGING.

This vomiting and purging of children, called by physicians, cholera infantum, prevails during the heat of summer; it is a dangerous and destructive disorder throughout the United States. Of all the complaints with which childhood becomes afflicted in its earlier stages, this is, at least among the infantine population of the western country, the most destructive. When this disease commences, it is very rapid in spreading itself through the section of country or neighborhood in which it first makes its appearance. Its desolation or fatal termination depends very much upon the season, section of country, and state of the atmosphere. This disorder generally shows itself before the middle of June, or about the commencement of our summer months, continuing its ravages through the whole season, gradually lessening in violence as the cool weather approaches. Its frequency and danger are always in proportion to the heat of the weather; children are subject to it from the third week after birth, to the second summer, at which period it is the most fatal to them.

Many distinguished physicians have been disposed to consider teething as the cause of this complaint. I am, however, convinced, that this is not the cause of cholera infantum, or puking and purging. Yet, in children laboring under the irritation of cutting teeth, I have no doubt this complaint is much more severe than it otherwise would be, and that it is more easily taken by them, and that the disorder is more apt to be fatal in its consequences I admit. But that it is brought about by the causes which I have before mentioned, will be admitted by every physician who has taken the trouble to investi-

gate, or, in other words, to search out the original causes of this disease.

As I have before told you, the digestive organs in the early stages of childhood, are liable to constant irregularities and irritations; but what excites morbid irritations in the intestinal canal, is perhaps difficult for the most learned of the profession, at the present day, to determine. Yet, whatever influence the irregularities of diet, teething, or other complaints, may have in producing this disorder, I am assured from long experience, that the violent heats of summer, together with sudden changes, or exposure to a moist and unhealthy state of the atmosphere, are the usual exciting causes of cholera infantum, or puking and purging.

*Symptoms.*—This disorder commences generally with a purging, but when severe, the child is seized with a puking and purging at the same time, when a few moments before it appeared in the enjoyment of full health. The discharge, or stool, is highly offensive, and colored, with a dark or yellow hue; the stools now become frequent, attended with severe griping; probably the motions will be as often as fifteen or twenty times during the twenty-four hours. So soon as the operation commences freely from the bowels, the vomiting or puking begins to cease; over the region of the stomach the slightest pressure will give pain, being very tender, and probably swelled; tongue white, thirst great, a constant craving for water between the times of purging, which cannot be satisfied. The skin becomes dry, and from the child falling away, which it does with great rapidity, the skin is very much shrunk on the inside of the thighs; and while the feet are cold, the head and belly are hot; pulse small and quick, sometimes full; generally towards evening the child is better, but after a short time the purging commences again. Countenance pale, wan, and languid; eyes sunk and dull; the child moans and sighs much; cannot sleep; is excessively irritable, sometimes attempting to bite its nurse, or rolling about its head, or constantly putting up its hands to its face; the stools become bloody. Even water it-



self will produce purging. The least jar or irregular motion gives it pain ; noise and light cannot be endured. It will scream on barely being touched. The gums are black and swelled ; the lips or their edges are filled with a dark scurf ; inflammation takes place ; the breathing becomes hurried and laborious ; the pulse quick, weak and irregular, and death closes the sufferings of one of the most painful and distressing diseases.

*Remedies.*—When this complaint is about to make its appearance which you will know by a purging, a white tongue, skin dry and hot, slight fever, attended with gripings, and occasionally accompanied with cramps of the abdominal and other muscles—nothing is of greater service than a gentle emetic in the morning, followed by a dose of rhubarb and magnesia equal parts, that is to say, from four to eight grains of each according to the age of the patient. The chalk mixture, as it is called, it is made as follows, half an ounce of prepared chalk, double refined sugar one fourth of an ounce, mucilage of gum arabic, one or two ounces ; mix them together and then add of water a pint, let the child take one or two table-spoonsful every hour or two, calomel is inadmissible altogether to children. But should there continue looseness of the bowels, with a dry skin and wakefulness, you are to obtain, at a doctor's shop, a phial of wine of ipecacuanha—which is nothing more than the ipecacuanha steeped or mixed in wine—of this medicine, give the child a few drops through a day, in a little warm tea of any kind ; this will produce a gentle moisture, or in other words, a moist sweat. At night, give a dose of paregoric. For dose of this, or any other medicine, refer to the table. The warm bath, that is, bathing the whole body of the child once or twice a day in warm water, will be found a valuable remedy, and greatly assist in the cure. Many children have entirely escaped this dangerous complaint by using daily the warm bath. By following the directions I have laid down in a great many cases, the complaint will be so relieved as to render the further use of medicine unnecessary.



The tincture of cinnamon will be found to be an excellent thing for children who have been weakened by this complaint it acts as an astringent and a tonic—it may be given in a little tea or water, from 10 to 15 drops three or four times a day.

A plaster of Burgundy pitch may be applied to the whole of the belly, so as to cover it, or where the child is weakened, and the skin dry, sponge the body all over with a towel dipped into cold water, at least every morning then wrap the child in a blanket or flannel.—You will find great benefit from covering the child's belly with carded cotton, over which you are to put a broad bandage, drawn moderately tight. The cotton thus borne, will check the purging. Should the child be teething when it takes this complaint, immediate attention ought to be paid to the gums, and cut, if necessary, when the teeth cannot pass through them. If the emetic or puke which I directed, should happen to act too severely, you can easily stop it by giving a dose of paregoric or laudanum, in a little tea made of cinnamon. So distressing in some cases are the effects of the vomiting or puking—not from the emetic, but from the disorder itself—that you will be under the necessity of seeking means to check it; for this purpose there is nothing better than weak lime water and new milk, in which put a few drops of laudanum or paregoric, or apply green peach-tree leaves, beat up, over the stomach and the breast—this is a valuable application for putting a stop to bilious vomiting: sulphuric ether is also a good remedy. If these, however, should fail in removing the vomiting or puking, a blister applied over the pit of the stomach will scarcely ever fail. This last remedy should not be applied until a fair trial is given those which precede it.

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#### WHOOPING COUGH.

This complaint occurs only once during life, and is contagious or catching. It prevails in the western country during the winter and spring months, and its

being mild or severe, depends very much on the atmosphere. When the winter and spring are extremely cold and wet, the whooping cough is generally severe, but on the contrary it appears under a much milder form.

*Symptoms.*—Whooping cough commences like a common cold, and as it gradually advances, the breathing becomes more hurried and difficult, the voice hoarse, attended with cough; great thirst, after a few days, a strange whooping sound is made whenever the child draws a long breath, followed immediately by the cough. The agitation of the whole system is such at this moment, that the child lays hold of whatever is nearest, in order to support himself during the fit of coughing; after which he pukes or spits up a tough, frothy, slimy mucus, and is for a short time relieved.

The treatment is quite simple:—when you discover the child to have taken it, give instantly an emetic, or puke, of antimonial wine—see table for dose—and should this puke not lessen the severity of the complaint, you are to give a second, and if necessary, a third; if bound in the body, a dose of castor oil. To lessen the cough, give frequently the juice of garlic sweetened with honey, or a tea-spoonful of sweet oil, to which you may add a few drops of paregoric or laudanum.

The whooping cough is generally most severe during night; to allay or ease the cough, the use of paregoric or laudanum will be highly necessary—for doses see table. I have found great benefit in my practice by using in this complaint the tincture of asafœdita—which is nothing more than a small lump of asafœdita steeped for a few days in a little whiskey, or any kind of spirits—of this tincture you are to give a few drops whenever the cough is severe, and you will find it to allay the irritation of the system, and mitigate or calm the cough.

Doctor Robertson, in the January number of the London Medical Repository, states that, of all the remedies he has ever employed in whooping cough, friction, ---which means rubbing—on the region of the stomach

with the tartarised ointment, has been the most undeviatingly useful; for as soon as the pimples begins to appear on the breast, the disorder begins to abate. This ointment is nothing more than emetic tartar mixed with a little hog's lard. For a description how to prepare it, look under the head "tartarised ointment."

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## MEASLES.

The measles generally make their appearance in the spring season. It is a contagious or catching disorder, and like the whooping cough, attacks but once during life.

*Symptoms.*—For a few days before they break out on the body, the child complains of sickness: seems dull and heavy; very great thirst, short, dry cough, with frequent sneezing, as if laboring under a severe cold; the eyes look red, and much inflamed. On the fourth day, the eruptions, or red pimples—which resemble flea-bites make their appearance on the face and neck, which soon extend to the breast, and then cover the whole body. In three or four days they begin to go off; at the same time, the fever which always accompanies the measles, begins gradually to decline. In some cases, the fever and cough will continue without lessening in their violence for several days or a week after the measles have entirely disappeared.

*Treatment.*—As soon as the sickness or drowsiness is observed, and you have cause to apprehend, from the symptoms I have already described, that your child is about to take the measles, open the bowels by castor oil, so as to procure two or three stools: the next evening—for it is at this time the fever is at the highest—give a gentle vomit, or puke of antimonial wine. You will find, by giving gentle pukes, that the child will be greatly relieved, by lessening the fever and oppression—this being the cause of the drowsiness and stupor. If



the vomit should both puke and purge, so much the better, for the child will be sooner relieved. When the fever and cough continue for a few days after the measles have entirely disappeared, a dose of castor oil will be proper, and which should occasionally be given during its continuance. About this time, there is a dark and offensive matter remains in the bowels that produces this fever, and which ought and must be removed by means of these gentle purges. You will always know if the fever continues, by the dullness, thirst, and want of appetite. Sometimes the measles and whooping cough attack the child at the same time: when this is the case, a physician should be immediately called, as there is considerable danger.

The diet in this complaint ought to be low: such as mush and boiled milk, chicken soup, &c. Nothing to be taken cold or hot, but moderately warm. Exposure to cold or damp must be avoided, or the disorder may strike in, which would be very dangerous. Let the child be kept in a room neither hot nor cold, but of a pleasant temperature. And you are to recollect that spirituous liquors of any kind, administered in any way, is highly improper. Bleeding is sometimes necessary when the inflammatory symptoms run high, or the cough is very severe; but it ought always to be performed, if possible, under the advice of a physician.—Blisters applied between the shoulders, or on the sides, will abate the cough, and may be safely used at any time during the complaint.

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## WORMS.

The worms which infest the human body are—the long round worm, the maw, or thread worm, the tape, or long joint worm, and the fluke worm. The long round worm is called by the physicians, the *ascaris lumbricoides*, deriving its name from its slipperiness. It has three nipples at its head, and a triangular mouth in its middle. Its length is from four to twelve inches,



and its thickness, when at its largest size, about that of a common goose-quill. The body is furrowed on each side, and the tail somewhat blunt. This worm is quite common in children, and not unfrequently it crawls out at the mouth. It is generally of a milky, brownish, or ash color.

The maw or thread worm—called by physicians *ascaris vermicularis*—has a blunt head; the tail of the male is blunt, but that of the female quite sharp and winding. It is generally from two to four inches long, quite small, about the size of a small thread, of a white color, and very elastic or springy.

This worm is generally found in the straight gut, or fundament—most commonly in children, but not unfrequently it is met with in grown persons also. They are frequently found in the intestines, or guts, in the form of a ball so completely covered with a slimy mucus, as to prevent the medicines which are usually given for worms, from acting—or in other words—causing their discharge by stool. In women, they sometimes escape into the vagina, or womb, and thence into the urethra, or canal through which the urine passes—and they are also found in the intestines of children.

The long thread worm—called, medically speaking, *tricocephalus dispar*—is from an inch and a half to two inches long—of a clear white; the head is sharp, the body of the male is constantly in motion, in a curved or winding form. The female is straight, with a blunt head and sharp tail; they contain a brown matter, and generally inhabit the large intestines.

The long tape worm—called by medical men *tænia solium*—is from one to six hundred feet in length: it is gifted with the power to contract or enlarge its diameter: that is, to draw up or increase its size at pleasure.—It rolls itself into a round form, and falls from one side of the stomach to the other on turning, when in a recumbent or lying position. When cramped by the position of the patient, or by hard pressure over the belly, or disturbed by food which does not agree with it, by medicine, or some diseases proper to it, or tormented

by the approach of death, it leaves its hold, leaps about and falls, as it were, into convulsions or fits.

The broad tape worm—called, medically, *bothrioccephalus latus*—The head is longer than it is broad, scarcely any neck. Its body is flat, generally, from ten to twenty feet long, and at its broadest part, from a quarter to a half an inch across, and of a white color.

The fluke worm is about an inch long, and of a dirty yellowish, greenish, or brownish color; you will know it by examining the worm which infests the livers of animals, as the sheep, the hog, the goat, &c., being the same worm.

It is extremely difficult to say what are the original causes which produce worms. It is therefore impossible that any physician, however learned he may be, can determine with any kind of certainty their origin. That improper diet or food, assists in producing worms, is correct; but it is only true so far as this improper food deranges the action of the stomach and bowels, and weakens their action; for worms seldom occur if the action of the bowels is healthy, strong and vigorous.—“Few infants have worms until they are weaned, which is to be accounted for on the principle, that the bowels are in better order during suckling than afterwards, when the diet is more varied and indigestible.”

Climate, infancy, weakened state of the bowels, and improper food, favor the production of worms. That climate has a particular influence, and is favorable to the origin of certain worms, is evident. A fourth part of the inhabitants of Grand Cairo have the tape worm; and in Holland—according to Rosen—it is quite common. In the United States it is quite rare.

**Symptoms.**—The head is generally affected: the face is pale, and sometimes of the color of bees-wax; the lower eye-lid becomes of a leaden color; itching is felt in the nose, occasionally picking it; the saliva, or spittle runs down over the pillow during sleep; the breath has a remarkable bad fœtor, or bad smell; frightened dreams; the child cries in its sleep and awakes with great terror;

itching about the navel; creeping or tearing pain in the belly, or a pricking and gnawing about the stomach; constant hunger, and yet the system becomes weak; frequent itching of the fundament; frequent dry cough, with tickling in the throat, accompanied with slow fever; these symptoms, singly or together, denote the presence of worms.

*Treatment.*—A great many medicines are daily employed for worms. From long experience, and an extensive practice, I have had a fair opportunity of testing their virtues, at the head of which stands calomel, wormseed oil, Carolina pink root—sometimes called Indian pink root, or pink root—and spirits of turpentine; all of which, when properly given, are valuable medicines for expelling worms.

You are first to commence by giving the child a suitable dose of calomel;—for which see table of medicines. You are occasionally to repeat this medicine as long as the stools have a very offensive smell, and look unnatural! On the days between the administering of the calomel, give the child a little aloes, pounded very fine, and mixed with honey. For dose see table. “I have never known a case of failure,” says a distinguished physician, “when the patient or child was freely purged with calomel, and then given either the wormseed oil, agreeably to the directions on the phials, in which it is sold, or the Indian pink root in tea.” For a description of this root look under the head Carolina pink root. The oil should be given on an empty stomach in the morning, on a lump of sugar, and when the pink-root is used make tea of it, by pouring a quart of boiling water on a handful of the roots, of which you are to give a cupful night and morning to the child; and to cause him to take it more readily, you may add milk and sugar; by this means children will take it as soon as any other tea. Sometimes the pink-root will occasion the eyes to become sore; when this is the case you are to stop using it until the eyes are perfectly well: this is produced, as is supposed, from some other root which grows with the pink root, and is frequently gathered



with it. After using the pink root for a week or ten days, give a dose of calomel or castor oil. In those species of worms which I have described as uncommon in our country, their expulsion, or discharge, is produced by spirits of turpentine, in large doses, requiring the advice and attendance of a physician.

Mr. Cloquet, a distinguished physician of France, affirms, that he has seen the long worm, or the one to which children are most subject, evacuated, or discharged by stool, after the belly had been rubbed with a mixture of ox's gall and common soap, oil of tansey or of camomile, mixed with spiritus in which camphor has been dissolved, or garlic; and by the application of a plaster composed of yellow wax, lithrage, asafœtida, and galbanum, applied to the belly.

Pure air, simple digestible food, exercise, and the use of all those means by which the system is strengthened, should be attended to; otherwise, as soon as they are expelled, they will again return. For this purpose occasionally administer to the child or person subject to worms, a simple dose of charcoal in new milk. According to the latest and most enlightened experience of the Medical Schools in Europe, charcoal is highly recommended.



## BLACK TONGUE.

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An epidemic erysipelas, invariably denominated Black Tongue, prevailed in various parts of the United States in 1843 and 1844, which proved a very fatal malady, and baffled the skill of many of our oldest physicians. The disease is almost uniformly ushered in by a chill, not very severe, but protracted, continuing with alternate flushes of heat, in some instances, two or three days; this is usually preceded or accompanied by soreness of the throat. When a reaction takes place, it is usually followed by a protracted sweating stage, which generally brings the patient to about the fourth or fifth day, during which time the tongue is covered with a whitish moist coat, the pulse varying but little from the natural standard, slightly modified by the different stages. At this time, in many cases, the patient will seem to be rapidly convalescing, being able to get out of bed; he will now feel some thirst or returning appetite, but if allowed to take either cold water or any mild article of food, it will cause incessant and most excruciating pains throughout the whole system. These pains, in some instances, appear to be neuralgic, (of the nerves,) as there are no external signs of inflammation; in others they seem to be rheumatic, attacking the fibrous tissues; but there is no part exempt from one or the other, and when confined to the abdominal regions, are almost uniformly fatal, more particularly so when the uterus is attacked, which is generally manifested by hemorrhagia, or discharge from the uterus; the discharge, however, quickly subsides, but the pain continues. The appearance of this discharge I regard as a fatal symptom, almost invariably terminating in death. These pains often attack the extremities, and are so violent that the wretched sufferer, for one moment's relief, would be willing to have

them severed from his body. After hours of intense agony, nature will seem to become exhausted, and will yield to the violence of the suffering. About the seat of pain in such cases, there are often found circumscribed echymosed spots, and sometimes pendulous bags of effused grumous bloody matter. The form of the disease is very rarely attended with any signs of inflammation; the pulse is not inordinately excited, and, indeed, often did not vary from the common standard; but the white coat on the tongue usually changes its color and assumes a yellow hue, and then becomes brown and dry. This disease sometimes assumes another form, which I will now describe. About the time that a crisis seems to be taking place, the inflammation will sometimes be transferred from the throat to some part of the face or side of the head, the nose, the external ear, or the skin immediately over that part of the gland nearest the ear, are generally the first parts on which it shows itself; from a small circumscribed spot, unless arrested, it gradually extends itself over the side of the face and head, and finally attacks the opposite side. In this form of the disease the external inflammation is evidently a translation or a continuance of that from the places where it first occurred. And here I will simply remark, that though the throat is frequently the first part attacked, yet it is by no means uniformly so. The extremities are sometimes the first part upon which the inflammation makes its appearance. The erysipelas often attacks the mucous membranes and extends itself either upon those membranes or to the skin and to the subjacent tissues.

*Treatment.*—The first thing to be done is to remove the biliary symptoms by a brisk calomel purge followed by a dose of senna and salts, or cream of tartar. Then keep up a secretory action by giving small doses of calomel and ipecac, say two grains of calomel combined with one-fourth of a grain of ipecac and given every two or three hours, and then work it off with senna tea given occasionally in small quantities. Venesection will rarely be necessary, and when resorted to, the quantity

of blood taken must be very small. For the throat a gargle of chloride of lime, or tincture of myrrh and creosote are very efficacious medicines to diminish the inflammation of the fauces; and sometimes a poultice of cayenne pepper and flour, or a poultice of parsnips, applied to the throat will have a very salutary effect. To arrest the inflammation in the skin, a strip of blistering to surround the place, or what is better, to cover the whole inflamed surface with a blister plaster, for as soon as suppuration is established the disease generally subsides.

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### CONGESTIVE FEVER.

As this treatise on congestive fever is not intended for the professional man, it is not expected that a very minute detail of its causes will be attempted; sufficient it is, therefore, to say that the disease is engendered in the system by malarious influence, operating on the constitution predisposed to take on this character of disordered action.

*Symptoms.*—The disease is ushered in by a protracted chill or cold stage, either violent in its attacks or slow and insidious, the pulse frequent and small, pain in the head, oppression about the chest, and restlessness; the patient frequently throwing his arms from under the cover, with some difficulty in filling the lungs with air, shrunk cadaverous features, cold extremities covered with free perspiration. In some instances, there is coma or stupor. The system reacts very slowly from the first paroxysm or chill, and generally proves fatal on the accession of the third chill. Indeed the arterial and nervous systems are so prostrated in the first or second chill, and the patient dies without reaction ever having been fully established. I mean by reaction the hot stage. There is imminent danger, and the friends of the afflicted should be on the look-out, when they see.

the system slowly struggling to recover itself from the cold stage.

This is one of the most unerring symptoms, that this fatal disease has made its way in the constitution.

*Treatment.*—There are many things to be considered in the treatment of congestive fever: the character of the attack, the state and strength of the constitution, and the condition of the stomach and bowels.

If the attack has been unexpected and violent, the stomach and bowels loaded with vitiated and feculent matter, a dose of ten or fifteen grains of calomel and twenty or twenty-five grains of ipecac. mixed in syrup should be administered immediately, and the patient be permitted to make heavy and repeated efforts to vomit before warm water is given for the emptying the stomach of its contents. These frequent efforts to vomit assist the small blood vessels in employing themselves and give to the heart more power to ward off internal congestion, thus bringing about reaction in the whole system.

The combination of the calomel and ipecac. hastens the action of the mercury upon the liver and bowels.

So soon as the emetic has fully operated and the stomach emptied of its contents and become sufficiently quiet, from five to ten grains of quinine should be given every hour until full reaction shall have been procured or the hot stage established. Little is then necessary to be done—sponging the body and extremities with cold water, which lessens the fever and cuts short the hot stage. As soon as the sweating stage commences, a free and full dose of Dover's powders should be administered—say five or six grains. This will hasten this stage, and the better prepare the system again for the use of quinine, which should be given in five grain doses every hour until the effects of the quinine appear, viz. noise in the ears, confusion about the head, and a free, full pulse.—The use of the quinine should be continued until after the time of the next paroxysm or chill shall have passed. The patient may be allowed cold water to drink or lem-



onade or tamarind water. When the system refuses to react from the cold stage under this treatment, I have been in the habit, for a number of years, of either throwing cold water on the patient or sponging the body all over until reaction has been accomplished, Where I have found the patient laboring under all the symptoms above described, with the addition of coma, I have stripped him naked and poured upon his body from a height many gallons of cold water; not judging of the effect by the quantity used, but by the effects produced.

## ACCIDENTS.

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When an accident takes place, by a fall from a horse, or a height, or being thrown from a carriage, or receiving a blow from a stick, or any similar injury to those I have mentioned, it will be proper, if possible, to bleed from the arm, but from any other part, if these parts are injured so as to prevent it. The loss of blood must be regulated according to the situation and circumstances of the case ; for frequently, the injury has been so severe as to deprive apparently, the patient of life ; in this situation, you must wait for the returning symptoms of animation, using friction ; or in other words, rubbing, so as to restore the circulation ; this will be proper over the region of the heart and stomach, temples, and the extremities, and bathing the temples with the spirit in which camphor has been dissolved, or spirits of harts-horn, or strong vinegar, at the same time applying it occasionally to the nose : and should the person be able to swallow, or so soon as they may be a little restored, it will be proper to give a little wine and water, or water and spirit of any kind, or any other gentle stimulant that may be convenient. In all cases of suspended animation, it is highly essential to continue for a length of time, friction, and in many difficult cases, you will find the tepid bath of great service in restoring life ; for I have frequently witnessed the person restored when all, and even the most distant hope seemed at an end ; therefore, let me implore you in such cases, to use gentle and continued friction on the body, for some vital spark may yet linger, and be warmed into animation—Providence may bless your kind efforts, and what heart-felt gratification will it afford you to be the humble instrument of restoring the life of a fellow-creature, who, per-

haps, in an unexpected and unprepared state, has been thus situated, with the last glimmering hope sinking fast into eternity. If I had space—and I regret I have not—I could give you several interesting cases that have fallen under my care, and many I have witnessed, particularly in the cases of drowning, in which the most happy effects have been produced by perseverance.—But on this highly important subject, let me refer you to the head, *Suspended Animation*.

In all cases, where the patient is unable from severe injury to walk, it is necessary immediately to prepare a conveyance—and for this purpose take two boards sufficiently long and broad, and then nail two cross pieces with the ends projecting like a foot for handles—or make, if the plank is not convenient, a litter formed of the branches of trees. On either of these, convey your patient to the nearest house. If the person should be bleeding, you must stop the blood before moving him or her. In removing him on and from this littler to the bed; be extremely careful, as many serious accidents occur by being in too great a hurry and alarm; frequently there is considerable pain inflicted unnecessarily, by awkwardly stripping off the coat or pantaloons; therefore rip up the seams, by which you prevent very often, much unnecessary pain; recollect never to use the least force. When the patient is stripped, and the room cleared of all unnecessary lookers on, which is generally the case, much to the annoyance of the patient and his physician, particularly if a female, then proceed to ascertain the injury, if a male, with calmness and firmness—if a female with tenderness and delicacy, yet with certainty as to the nature of the injury. I would here remark, in plain language, as I have always done in all my advice and writings, that false delicacy has in many instances, destroyed the lives of many females, that might have otherwise been easily preserved. With these remarks and directions, I shall in as few words as possible, and in plain language, proceed to give such directions in surgery, as may be easily performed by the most humble person who will but attend to the directions.

*Injuries* may be simple or compound ; that is, it may be a contusion of bruise, a wound, a fracture, or dislocation, or it may be two or all of them, united, in one or several parts.

A *Contusion* is of course the consequence of every blow, and is known by the swelling and the skin being bruised and discolored—wounds require of course no explanation.

*Fractures*, in other words, broken bones, are known by the sudden and severe pain, and by the appearance of the limb being out of shape—sometimes, by its being shortened, and by the person being unable to move it without great pain. But the most certain way to ascertain it, is to grasp the limb above and below the spot supposed to be fractured, and by moving it gently different ways, you hear a grating noise, occasioned by the broken ends of the bone rubbing against each other.—Very often, however, before you can arrive to render assistance, the limb becomes much swollen. In such a case, always reduce first the swelling, as by twisting the limb or other experiments, it will give the most excruciating pain to the afflicted person.

*Dislocations*, or in other words, bones being out of joint, are easily perceived by the deformity of the joint which you can compare with its fellow, and plainly observe the difference, and from the person being in great pain, and unable to move the limb, and by its being longer or shorter than common, and from the impossibility of moving it in any direction, without great misery.

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#### CONTUSION OR BLOW.

If slight, you must bathe the part frequently with cold applications, such as vinegar and water, ice water, or cold spring water, this will reduce or keep down inflammation of fever : this must be occasionally used for five or eight hours ; but if fever should come on, then bleed, and purge well with salts, and diet the person on the lightest food and cool drinks. If the fever should still



continue, you must repeat the bleeding and purging, perhaps a good active dose of calomel, followed by a dose of salts, in this event, would cut short the fever.—Be particular as to the patient's passing his water, as it frequently happens from a blow, that the nerves of the bladder become palsied, and the patient feels no desire to make water, although the bladder is full. In this case, it is highly important, to attend to drawing off the water by a catheter, an instrument for this purpose; for directions how it is used, see under the head directions for passing Catheter.

The most serious effects, however, resulting from contusion, is when the blow is on the head, producing, either concussion or compression of the brain. See those heads.

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### SPRAINS.

Sprains are to be treated with the coldest applications; and for this purpose Nature's remedy is by far the best; cold water. After which, dry it with a coarse towel, and rub on it spirits of camphor; by which I mean, spirits that camphor has been dissolved in; rub this well in, and bind it with flannel, and every morning and evening, pour cold water on it from the spout of a tea-kettle, held up at a considerable height. This simple remedy will relieve you in a short time, and to a weak joint of any kind, this is an invaluable prescription. I have removed the weakness of an ankle of long standing by it, when all other applications failed.

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### CONTUSION OF THE BRAIN.

*Symptoms.*—The person stunned—the breathing slow—great drowsiness and stupidity---the pupil of the eye rather contracted, or drawn up—frequent vomiting or puking. After a time he recovers.

*Treatment.*---Apply cloths dipped into cold vinegar and water to the head ; and if you have ice, its application will be greatly beneficial. So soon as the stupor is off, bleed, and open the bowels with epsom salts, or any cooling purge ; by all means confine him to the bed, and the lowest and most cooling diets and drinks---the room keep dark but cool, and no noise whatever. In this quiet situation, you are to endeavor to prevent inflammation of the brain, which, if it comes on, must be met by free and copious bleeding, blisters and purging.

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### COMPRESSION OF THE BRAIN.

*Symptoms.*---Loss of sense and motion---slow, noisy, and difficult breathing---the pulse is quite slow and irregular---the muscles relaxed, as in a person just dead---the pupil of the eye enlarged, and will not contract, even for a strong light---the person cannot be roused and bears a resemblance to one afflicted with an apoplectic fit.

*Treatment.*---Bleed freely, and shave the head, and apply cool applications unto it, until you can procure a good surgeon, and this must be done immediately or it will be too late, as there is nothing but an operation in this case, that will save life.

## WOUNDS.

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Wounds are of three kinds; first incised wound, which means a clean cut—secondly, a punctured wound, which means a wound produced by sharp pointed instruments, as needles, awls, nails, &c.—thirdly, contused wounds, which means wounds occasioned by round or blunt bodies, as musket balls, clubs, stones, and all gun shot wounds, are included in this last mentioned term.

*Treatment.*—In all wounds, the first thing to be done, is to endeavor to stop the flow of blood; should this be but trifling, draw the edges of the wound together with your hand, and hold them in that position some time, when the blood will frequently stop. If it still continue, and the quantity large, or of a bright red color, flowing in spirits, or with a sudden jerk, then clap your finger on the spot it springs from, and press it with firmness while you request some other person to pass a handkerchief round the limb, (supposing the wound to be in one,) above the cut, and to tie its two ends together in a hard knot. A stick of any kind, must now be passed under the knot, (between the upper surface of the limb and the handkerchief,) and turned round and round until the stick is brought down to the thigh, so as to make the handkerchief encircle it with considerable tightness; you may then take off your finger; if the blood still flows, tighten the handkerchief by a turn or two of the stick, until the blood ceases. The patient may now be removed, (taking care to secure the stick in its position,) without running any risk of bleeding to death by the way. As this apparatus can not be left on for any length of time without destroying the life of the parts, endeavor as quick as you conveniently can,

to secure the bleeding vessels; for I shall give you such plain and ample directions, that any person of common sense may take them up and secure them in a proper manner, and perfectly safe. In the first place, wax together three or four threads of a sufficient length, cut it into as many as you think there are vessels to be taken up, each piece being about a foot long. Now wash the parts with warm water, and then with a sharp hook, similar to a crooked awl, or a slender pair of pincers in your hand, fix your eye steadfastly upon the wound, and direct the handkerchief to be gently loosed by a turn or two of the stick: you will now see the mouth of the artery, from which the blood springs:—seize it with your hook or pincers, draw it a little out, while the person who assists you, passes the wax thread (called by medical men, a ligature) round the artery or bleeding vessel; now tie it up tight, with a double knot. In this way take up one after the other. each bleeding vessel you can see or get hold of.

Should the wound be too high up in a limb to apply the handkerchief, don't be alarmed, for the bleeding can still be commanded. If it is the thigh, press firmly on the groin, or if in the arm, with the hand, the end or ring of a common door key, make pressure above the collar bone, and about its middle, against the first rib which lies under it. The pressure is to be continued until you can obtain assistance, and then tie up the bleeding vessels as before directed. If the wound is on the head, you must press your finger firmly on it until a compress, (which means several folds of linen,) is furnished; this is to be bound firmly over the artery by a bandage. If the wound is in the face, or so situated that pressure cannot be effectually made, or you cannot get hold of the vessel, and the blood flows fast, put a piece of ice, or a cloth wet with tanner's ooze, or flour, and let it remain on until the blood coagulates, you can then remove it and apply a compress and bandage. It is impossible that this simple method I have described, should be practised so as to enable any one to compress the great arteries in these situations, thereby preserving many a man, who would for the want of



this simple assistance, bleed to death, before a surgeon or medical aid could be procured.

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## INCISED WOUNDS.

The meaning of an incised wound, is, a clean or fresh cut. Wash away all the dirt that may be in the wound with a sponge or linen rag and warm water ; when the blood is stopped, draw the sides of the wound nicely together, then confine it in this situation by narrow strips of sticking plaster, placed at short distances apart and directly across the wound. Now a fold, (or, soft compress of cold linen or lint,) is to be laid over and confined by a bandage.

In many cases, you will find inflammation follow. If this should be the case, then remove the strips, and bleed and purge the patient, and keep him on very low diet, and as quiet and cool as possible : in other or more plain language, endeavor to keep down fever—and now recollect that matter must form before the wound can heal ; therefore, it is best to encourage it by applying a soft poultice of any kind, until the matter is produced ; after which you may use any simple ointment in its place. The usual or common method of narrow strips of linen, spread with sticking plaster, called by physicians adhesive plaster, from the best means of keeping the sides of a wound together when they can be applied ; yet if the wound is in the ear, nose, tongue, lips, bag, by which I mean the privates, on the eye lids, then use stitches which are made in the following manner : Thread a common needle with a double waxed thread, pass the point of it through the skin at a little distance from the edge of the cut, and bring it out of the opposite one to the same distance. Should the wound be large, so as to require more than one stitch, cut off the needle, thread it again, and proceed on to take as many stitches as necessary : leave all the threads loose until all the stitches are passed, when the ends of each thread must be tied in a hard double knot, drawing the thread

in such a way that it bears a little on the side of the cut. When the edges of the wound are partly united by inflammation, cut then the knots, and draw out carefully all the threads. From the plain manner in which I have written and explained to you, you will easily perceive, that in all wounds, after stopping the flow of blood, and cleasing the parts, the important point is to bring the sides of the wound even, and together, so that it may grow together as quick as possible, without producing any matter: this is called by physicians, healing by the first intention. Now to produce this desirable effect, in addition to what I have already mentioned, you must recollect two things necessary to be attended to; first the position of the patient; and secondly, the application of the bandage. Let the position be such as will relax as much as possible, the skin and muscles of the part wounded; by attending to this strictly, you will prevent, or in a great measure lessen the tendency to separate or open. My method in such cases, is as follows: take a common bandage of proper width and length, and pass it over the compresses moderately tight, so as to keep them in their proper place, and by its pressure, the wound will heal immediately, and keep it from separating or opening. In many cases, the wound is so large and severely painful that the limb or body of the patient cannot be raised or moved, for the purpose of applying or removing it; then spread the ends of one or two strips of linen or leather with sticking plaster, which may be applied in place of the bandage, in the following way: stick one end of the strip to the sound skin, at a short distance from the edge of the compress, over which it is to be drawn with moderate firmness, and secured in the same manner on the opposite side; if you see that it is necessary to secure it more fully, apply a second or third, or until properly secured. As I have before told you, if violent inflammation comes on, in all wounds the proper practice is to reduce it by bleeding, purging, &c.. but if you see any symptoms of approaching locked jaw, give your patient wine, brandy, opium, porter, &c., in other words stimulate him freely, and give a generous diet.

## PUNCTURED WOUNDS.

These wounds, called by physicians punctured wounds, are produced by any sharp pointed instruments, as nails, awls, needles, &c.

*Treatment.*—First stop the bleeding, then withdraw the needle, splinter, glass, or any thing that may be in a wound of this nature, provided it can be done easily; and if enlarging the wound a little will enable you to get any foreign body out, it is best to do so. Though it is not always necessary to enlarge wounds of this nature: yet when the weather is very warm, I advise you not to neglect doing so; because it is a precaution against locked-jaw, which occurs frequently in wounds of this description. I recollect a case in 1816, that occurred at Savannah, Georgia. A Miss D—— L——, a most amiable and accomplished lady, in making preparations for a ball, by accident stuck a needle slightly in her heel. The puncture being slight, she attended the ball. On the following day, symptoms of lock-jaw commenced; and the second day, notwithstanding the skill afforded her by several eminent professional gentlemen, she died. So soon as you enlarge a wound of this description as directed, pour a little turpentine in the wound, or touch it with caustic, and then cover it with a poultice, moistened with laudanum; the object of the poultice is to form matter. When this is done, you must then treat it as a common sore, with mild ointment of any kind.—Frequently in such cases, there is a great deal of pain; if so, give laudanum in large doses—you need not fear giving laudanum in broken doses, until the patient gets ease; for I have given it as high as two hundred drops, say thirty at each dose, before partial ease could be afforded. In warm weather, inflammation often occurs; in such a case bleed in moderation, and purge freely—recollect here to use the lancet with care and discretion.

## CONTUSED WOUNDS.

Wounds of this description are made by round or blount bodies, as musket balls, clubs, stones, &c. In such wounds you may have little to fear of loss of blood, as they are attended, generally, by little bleeding; if any, it must be stopped. If the wound is produced by a ball, and the ball can be felt, or easily got at, it is proper to extract; it is proper to do so, or any piece of the wad or cloth, or clothing should be withdrawn; for instance, if the ball can be plainly felt immediately under the skin, then make an incision across it, and take it out. But remember well, this salutary council: never allow any poking in the wound to search for a ball or any articles differently situated from what I have plainly described, for many deaths occur, which if properly managed, or in other words, so much unnecessary science dispensed with, would have been entirely cured. The best extractor in such cases is a soft bread and milk poultice. In fact, by long experience and reflection, I would say that gun-shot wounds that have formed a lodgment must not be opened, either lightly or wantonly, nor under the idea of hunting for extraneous substances; for the parts themselves will bring these to the surface, and such as cannot be thus extracted, give little trouble, nor do they prevent the healing of the wound. It is particularly vain to hunt balls, because they take a wayward course, and often find a lodgment where the surgeon or physician would be least inclined to look for them. Even if the ball can be felt, and yet the skin is sound, some eminent surgeons think it will not be prudent to extract it before the original wound is healed, because, where it rests it can do no harm, and is better to have only one wound at a time than two. When a ball has wounded a cavity, as for example, the abdomen, which means the belly; if the ball has passed with little velocity, the parts will heal by the first intention. You will recollect I explained plainly to you the meaning of healing by the first intention. If, however, it has



passed with such velocity or quickness, as to procure a slough, meaning an inward bruise, the adhesive inflammation will take place on the peritonæum, meaning the skin which lines the belly, and covers the abdominal viscera, or in other words, the bowels, and the organs in the belly and chest. The adhesive inflammation, as remarked, will take place on this peritonæum all around the wound, which will prevent the general cavity from taking part in the inflammation, although the ball shall have not only penetrated but wounded those parts not immediately essential to life, in its passage through the body; for whatever solid viscus has been pierced, the surfaces in contact, surrounding every orifice, will unite by the adhesive inflammation, so as to form one continued canal, with which the general cavity has no communication. If any extraneous or outward body has been carried in by the ball, it will be included in these adhesions, and with the sloughs, will be conducted by one of the orifices to the outward surface.

If the ball has wounded the liver on the surface, these may soon acquire the healing disposition; if the stomach, intestines, kidneys, ureters, or bladder, such injuries are generally mortal; for their contents escape into the cavity of the abdomen or belly, and universal inflammation of the peritonæum takes place, attended by great pain and tension or swelling, which terminates in death. But if the wound is small, and the bowels are not full, adhesions may take place all round the wound, which will confine the matter, and make it go on its right channel. When a ball has not penetrated any of the viscera of the abdomen, but only by contusion produced death in a part, whenever the slough comes away, the matter contained in that viscus will escape, but as the adhesive inflammation takes place between the surfaces in contact, the new channel will be preserved entire, and cut off the communication between the external air and the cavity of the abdomen. This channel may, however, in time be closed, and the contents may pass by their accustomed course. A young gentleman was shot through the body, the balls, three in number, entered on the left side of the navel, and came out behind just above the

superior vertebræ of the loins. The first water he made was bloody—in less than a fortnight, John Hunter, the most eminent surgeon of London, pronounced him out of danger, being persuaded that whatever cavities the balls had entered, were united by the adhesive inflammation, so as to form one complete canal, and that neither the extraneous matters, carried in with the balls, nor any sloughs, which might separate from the sides of the canal, nor matter formed in it, could get into the cavity of the abdomen, but must be conducted to the external surface of the body, either through the wounds or from an abscess forming for itself, which would work its own exit somewhere. Soon after this conclusion, some fæces (meaning that which should pass from the fundament,) coming through the wound, confirmed him in his opinion respecting the efforts of nature, which are great on such occasions to secure the cavity of the abdomen: yet he feared this wound might in future perform the functions of the fundament. He saw clearly that an intestine had received a bruise sufficient to kill the part, and that till the separation of slough had taken place, both the intestine and canal were still complete, and therefore did not communicate with each other, but that when the slough was broken of, the two were laid into one at this part, and that therefore the contents of the intestines got into the wound. This symptom, however, gradually decreased, by the contraction of this opening, till an entire stop to the passage of the fæces by it took place, and the wounds were healed, and the gentleman entirely restored to health.

Having fully described to you the effects of gun-shot wounds, and their general effects, I shall conclude by directing you in such cases, should the inflammation be great, bleed and purge. If your patient labors under great pain, give laudanum, and if the parts assume a dark look, threatening a mortification, cover them with a blister. When the wound is much torn, wash the parts very nicely with warm water, and then (having secured every bleeding vessel) lay them all down in as natural a position as possible, drawing their edges gently together, or as much so as possible, by strips of sticking

plaster, or stitches, if necessary. Now apply a soft bread and milk poultice over the whole.

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#### WOUNDS OF THE EAR, NOSE, &c.

*Treatment.*—Wash the parts well, so as to cleanse them from all dirt, &c., and then draw the edges of the wound together by as many stitches as are necessary. If the part is even completely separated, and has been trodden under foot, by washing it in warm water and placing it even, and accurately in its proper place, by the same means it may still adhere or grow on.

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#### WOUNDS OF THE SCALP.

*Treatment.*—In wounds of the scalp, it is necessary to shave off the hair. After this operation is performed, wash the parts well, and draw the edges of the wound together with sticking plaster. If it has been torn up in several places, wash and lay them all down on the skull again, drawing their edges together as nearly as possible by sticking plaster, or, if necessary, by stitches. Then cover the whole with a soft fold or bandage, smeared with some simple ointment of any kind.

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#### WOUNDS OF THE THROAT.

*Treatment.*—Seize and tie up every bleeding vessel you can get hold of. If the wind pipe is cut only partly through, secure it with sticking plaster. If it is completely divided, bring its edges together by stitches, taking care to pass the needle through the loose membrane that covers the wind pipe, and not through the wind pipe itself. The head should be bent on the breast during this operation, and secured by bolsters and bandages in that position, to favor the approximation of the wound.

## WOUNDS OF THE CHEST.

If the wound in the chest is a simple incised wound, draw the edges of it together by sticking plaster, cover it by a fold or compress of linen, and pass a bandage round the chest. The patient is to be confined to his bed, kept on very low diet, and bled and purged, in order to prevent inflammation. If, however, inflammation should come on, you must reduce it by copious and frequent bleeding. Should the wound be occasioned by a bullet, extract it, and any piece of cloth, &c., that may be lodged in it, if possible, and cover the wound with a piece of linen smeared with some simple ointment, taking great care that it is not drawn into the chest. If a portion of the lung protrudes or projects out, return it to its place immediately, but be as gentle and cautious as possible.

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## WOUNDS OF THE BELLY.

In wounds of the belly, close it by strips of sticking plaster, and stitches passed through the skin, about half an inch from the edge of the wound, and cover the whole with a soft compress of linen, secured by a bandage. Any inflammation that may arise, is to be reduced by bleeding, purging, and a blister over the whole belly. Should any part of the bowels come out at the wound, if clean and uninjured, return it as quickly as possible; if covered with dirt, clots of blood, &c., wash it carefully in warm water previously to returning it. If the gut is wounded, and only cut partly through, draw the two edges of it together by a stitch, and return it; if completely divided, you must connect the edges by four stitches at equal distances, and replace it in the belly, always leaving the end of the ligature or thread projected from the external wound, which must be closed by sticking plaster. In five or six days, if the threads are loose, withdraw them very gently and carefully.



## WOUNDS OF JOINTS.

In wounds of this description, you are to bring the edges of the wound together by sticking plaster, without any delay; keep the part perfectly at rest, bleed, purge, and live very low, so as to prevent inflammation. But should it come on, it must be met at its first approach by bleeding to as great an extent as the condition of the patient will warrant, and by a blister covering the whole joint. If the joint seems like it would be a stiff one, keep the limb in that position which will prove the most useful; that is, the leg should be extended, and the arm bent at the elbow. Wounds of the joints are always highly dangerous, and frequently terminate fatally.

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## WOUNDS OF THE TENDONS.

Tendons or sinews are frequently wounded and ruptured. They are to be treated precisely like any other wounds, by keeping their divided parts together. The tendons which connect the great muscle forming the calf of the leg with the heel, called the tendon of Achilles, is frequently cut with the adz, and ruptured in jumping from heights. This accident is to be remedied by drawing up the heel, extending the foot, and placing a splint on the fore part of the leg, extending from the knee to beyond the toes, which being secured in that position by a bandage, keeps the foot in the position just mentioned. The hollows under the splint must be filled with tow or cotton. If the skin falls into the space between the ends of the tendon, apply a piece of sticking plaster, so as to draw it out of the way. It usually takes five or six weeks to unite, but no weight should be laid on the limb for several months.

## OF FRACTURES.

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As I have before plainly pointed out to you how fractures may be known, it will be unnecessary to dwell on this subject. It will, however, be advisable for you to recollect this general rule: In cases where, from the accompanying circumstances and symptoms, a strong suspicion exists that a bone is fractured, it will be proper for you to act as though it were positively ascertained to be so.

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### FRACTURES OF THE BONE OF THE NOSE.

*Treatment.*—From the exposed situation of the bones of the nose, they are frequently forced in. When this is the case, any smooth article that will pass into the nostril should be immediately introduced with one hand, so as to raise the depressed portions to the upper level, while the other is employed in moulding them into the required shape. If violent inflammation follows, bleed, purge, and live on the lowest kind of diet.

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### FRACTURES OF THE LOWER JAW.

*Treatment.*—There is no difficulty in discovering this accident by looking into the mouth; and it is to be relieved by keeping the lower jaw firmly pressed against the upper one, by means of a bandage passed under the chin and over the head. If it is broken near the angle, or that part nearest the ear, place a cushion or roll of linen behind it over which the bandage must pass, so as

to make it push that part of the bone forward. The parts are then to be confined in this way for twenty or twenty-five days; during which time, all the nourishment that is taken by the patient should be sucked between the teeth. If, in consequence of the blow, a tooth is loosened, do not meddle with it, for if let alone, it will grow fast again.

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## FRACTURE OF THE CLAVICLE, OR, COLLAR BONE.

The clavicle may be broken by a blow directly upon it, but it is most commonly broken in consequence of the person pitching on his shoulder, as in falling from horseback. The fracture of this bone is ascertained by remarking that the shoulder is fallen down towards the breast, and on feeling along the bone, the crepitation of the broken ends is perceived, or the broken ends are found to have passed each other, and one of them to ride upon the other.

The motion which the patient makes with the greatest difficulty, is to touch the shoulder of the opposite side, or to raise his hand to his forehead; for this motion twists the broken clavicle, and forces the broken ends into the cellular membrane. The indication is to keep the shoulder from falling forward, and the arm from dragging. If the patient be drunk, compresses are to be put over the tendons, pectoralis major, or the point of the shoulder, as it is called, and a figure of 8 bandage to be so applied as to draw the shoulder powerfully back, that no struggling or thoughtless motion be allowed which might tear the parts against the sharp bones.

When the bone is to set, an assistant draws back the shoulder, while the surgeon examines the position of the bones; and when the broken ends have been drawn into their natural relation, some flat compresses of linen are to be placed, as directed, before the arm-pits, that the bandage may not cut the skin.

The double-headed roller is now to be applied: (what we mean by *double-headed*, is a piece of cloth, say do-

mestic, with each end rolled up until they meet in the middle.) Putting the middle of the roller across the back, the surgeon brings two turns under the arm-pits and over the shoulder, then, by crossing the roller on the back and again bringing the turns to bear on the shoulders, they are retained or braced back: after a few yards of the roller are thus applied, the shoulders are fixed, and the arm cannot fall forward.

Now a soft cushion, or pad of lint, is to be placed in the axilla, and the turns of the roller being secured, the end is to be brought down upon the back and outside of the arm, so as to bear on the elbow and brace it to the side. This, in consequence of the compress being in the axilla, still further removes the shoulder from the sternum, or breast bone, and keeps the broken ends of the bones from passing each other.

If the bones come easily into their place, then the pad need not be applied in the axilla, until after the time the roller is somewhat loosened by stretching, or it be necessary to make some substitute for the severe bracing of the roller. When the shoulder is braced back, we must notice if the bones be the exact level; and at all events, it is necessary to sling the arm, to prevent the falling down of the outer portion of the clavicle; for this purpose, the fore-arm is put in a large handkerchief, the ends of which are to be tied round the neck.

No kind of compress must be allowed on the ends of the broken bones, for they are ineffectual as to keeping the bones in their place, and only press the tender skin against the sharp bone. If it be found that the patient is often feeling and pressing the bone, it may be well to put a piece of leather, spread with adhesive plaster, over the clavicle, simply to keep off his fingers.

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## FRACTURES OF THE ARM.

*Treatment.*—Seat your patient on a chair, or the side of a bed, let some one assist you to hold the sound



arm, while another person grasps the wrist of the broken one, and steadily extends it in an opposite direction, bending the fore-arm a little, to serve as a lever. You must now place the bones in their proper situation, two splints, made of shingle or stout paste board, long enough to reach from below the shoulder, to near the elbow, must then be well covered with tow or cotton, and laid along each side of the arm, and kept in that position by a bandage. The fore-arm is to be supported in a sling. Two smaller splints may, for better security, be laid between the first ones, that is, one on top, and the other underneath the arm, to be secured by the bandage, in the same way as the others.

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#### FRACTURE OF THE BONES OF THE FORE-ARM.

As I have before, and I now again tell you, it is that part which reaches from the elbow to the wrist, that is designated or called the *fore-arm*. When this is fractured, they are to be reduced precisely in the same way, with the exception of the mode of keeping the upper portion of it steady; which is done by grasping the arm above the elbow. When the splints and bandage which I have directed you how to make, are applied, support it in a sling.

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#### FRACTURES OF THE WRIST.

Fractures of the wrist very seldom take place.—When this accident does happen, the injury is generally so great as to require amputation or taking it off. If it is possible to save the hand, lay it on a splint, well covered with tow or cotton. This is to extend beyond the fingers—place then another splint opposite to it, lined with the same soft domestic cloth, or tow or cotton, and then lay a splint on it long enough to extend from the elbow to beyond the ends of the fingers, and then to be secured by a bandage. If the finger is broken,

extend the end of it until it becomes straight. Place the fractured or broken bone in its proper place, and apply two small paste board splints, one below and the other above, which you must secure by a narrow bandage. The upper splint ought to extend from the end of the finger over the back of the hand. It may sometimes be proper to add two additional splints for the sides of the finger.

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### FRACTURES OF THE RIBS.

When after a fall or blow, the patient complains of a pricking pain in his side, we may suspect a rib is broken. The way to discover it, is by placing the ends of two or three of your fingers on the spot where the pain is, and desiring the patient to cough, when the grating sensation will be felt. All that is necessary, is to pass a broad bandage round the chest, so tight as to prevent the motion of the ribs in breathing, and to live on light diet.

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### FRACTURES OF THE THIGH.

In the treatment of the fractured thigh bone, we have many things recommended, and a variety of apparatus advised, because, in truth, every surgeon has experienced difficulty and disappointment in managing it. What I have now to offer, will, I hope, be found simple, and, in proportion to its simplicity, effectual for securing the limb in the best position.

It will be necessary, for a while, to secure the limb with the common splint and bandage, and lay it out on a pillow. In an hour a frame may be constructed: two boards of ten or eleven inches in breadth, and of a length equal to the distance of the heel from the back of the knee joint, are to be united at an angle, answering to an easy and relaxed flexion of the limb, and

secured by a horizontal board, so that the knee will be drawn up about half way to a right line with the body or hip joint, Near the edge of the inclined boards, holes are to be made and pegs of wood fitted to them; cushions or pads are to be laid on this frame, when it is ready to receive the limb. The limb is to be laid over the cushions or matrasses thus supported on their frame. The bone is now to be accurately set (if it has not been already done) by the assistant taking the knee and gently extending it, while the surgeon puts his hands wide over the thigh and the fractured part, that he may feel the crepitation and the motion which the broken extremities of the bone suffer. Now, one long splint is to be laid on the outside of the thigh, reaching from the hip to the side of the knee, another upon the inside of the thigh, and over these bandages which surgeons call the *eighteen tailed* bandage, is to be applied. What we mean by a bandage with eighteen tails, is simply a piece of cloth, say domestic, of the width of from the knee to the upper part of the thigh, then cut it from the ends, say six or eight inches, into tails of from one to two inches wide at each end. Having applied the bandage, it is now to be observed how far the thigh answers to the inclined plane on which it rests in the position I have above mentioned. The most frequent kind of defect is shortening of the thigh, together with a twist of the limb, which lames the patient by depriving him of the strength from the muscles of the legs, and takes at the same time, the length of the foot from the step of that leg. Having, as we hope, done all that can be done, by the substitution of a simple contrivance, and by making the weight of the body the counterpoise to the strength of the muscles, to prevent retraction of the limb, and consequently the permanent shortening of it.

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#### FRACTURES OF THE BONES OF THE FOOT.

This accident seldom occurs—the bone of the heel is sometimes though rarely broken. It is known by a

crack at the moment of the accident, a difficulty in standing, by the quick swelling, and by the grating noise on moving the heel. To reduce it, take a long bandage, lay the end of it on the top of the foot, convey it over the toes under the sole of the foot, and then by several turns secure it in that position. The foot being extended as much as possible, carry the bandage along the back of the leg above the knee, where it is to be secured by several turns, and then brought down on the front of the leg, to which it is secured by circular turns. In this manner, the broken pieces will be kept in contact, and in the course of a month or six weeks, will be united.

All fractures of the foot, toes, &c., are to be treated like those of the hand and fingers.



## OF DISLOCATIONS.

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The signs by which a dislocation may be known have been already explained to you. But remember that the sooner the attempt is made to place it in its proper place, the easier it will be done. The strength of one man, properly applied at the moment of the accident, will often succeed in restoring the head of a bone to its place, which in a few days and even hours would have required the combined efforts of men and pulleys. After you have made several trials with the best apparatus that can be obtained, and you can not succeed, make the patient stand up, having all things in readiness, and bleed him in that position until he faints; the moment this occurs the muscles will relax, and a slight force will often be sufficient, where more powerful ones have been used without effect. Also, recollect to vary the direction of the extending force. A slight pull in one way will often effect what has been in vain attempted by great force in another.

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### DISLOCATION OF THE LOWER JAW.

Dislocation of the lower jaw is produced by blows or yawning, usually called gaping. It is known by an inability to shut the mouth, and the projection of the skin. To reduce it is quite simple: Seat the patient in a chair, with his head supported by the breast of an assistant, who must stand behind him. Your thumbs being covered with leather [or a glove] are then pushed between the jaws, as far back as possible, while with the fingers outside, you grasp the bone, which must be pressed downwards, at the same time that the chin is raised.—If this is properly done, the bone will be found moving,

when the chin is to be pushed backwards, and the thumbs slipped between the jaws and the cheeks. If this is not done, they will be bitten by the sudden snap of the teeth as they come together. The jaws should be kept closed by a bandage for a few days, and the patient live upon soup.

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### DISLOCATION OF THE SHOULDER,

This accident is quite common, and the most so of all the dislocations mentioned. You can easily discover it, by the deformity of the joint, and the head of the bone being found in some unnatural position. To reduce it to its proper place, seat your patient in a chair, place one hand on the prominent part of the shoulder blade, just above the spot where the head of the bone should be, while with the other you grasp the arm above the elbow, and then pull it outwards.

Sometimes this will not succeed; if so, then lay the patient on the ground, place your heel in his arm pit, and then steadily and forcibly extend the arm by grasping it at the wrist.

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### DISLOCATION OF THE COLLAR BONE.

The Collar Bone is seldom dislocated; but should it take place, the treatment is, to apply the bandages, &c., as you have been already directed for a fracture of the same part, *which see*.

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### DISLOCATION OF THE ELBOW.

If this dislocation has occurred by falling on the hands, which is most common, or hold his arms bent at the elbow, and every endeavor to straighten it gives him great pain, it is dislocated backwards. Seat the patient in a chair, let some one grasp the arm near the shoulder, and another the wrist, and forcibly extend it, while you interlock the fingers of both hands just above the elbow, and

pull it backwards, remembering that under those circumstances, whatever degree of force is required, should be applied in this direction. The elbow is sometimes dislocated sideways or laterally. To reduce it, make extension by pulling at the wrist, while some one secures the arm above; then push the bone into its place, either inwards or outwards, as may be required. After the reduction of a dislocated elbow, keep the joint at perfect rest for five or six days, and then move it gently. If inflammation should come on, treat it as I have before told you in all inflammations—bleed freely, purge, &c.

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#### DISLOCATIONS OF THE WRIST, FINGERS, &c.

Dislocations of this nature are common, and easily known, by the least examination; they are all to be reduced by forcibly extending the lower extremity of the part, and pushing the bones into their place. If necessary small bands may be secured to the fingers by a narrow bandage, to assist the extension. These accidents should be attended to without delay; for if they are neglected for a little time, they become irremediable or incurable.

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#### DISLOCATION OF THE THIGH.

Notwithstanding the hip joint is the strongest one in the whole body, it is sometimes dislocated. The method of ascertaining this accident is by a careful examination of the part. Comparing the length and appearance of the limb with its fellow, &c., sufficiently mark the nature of the accident. I will proceed to state the remedy.

Place the patient on his back, upon a table covered with a blanket. Two sheets folded like cravats, are then to be passed between the thigh and the testicle of each side, and their ends (one half of each sheet passing obliquely over the belly to the opposite shoulder, while the other half passes under the back in the same direction) given to several assistants, or what is much better, tied very firmly to a hook, staple, post or some immoveable

body. A large and very strong towel, folded as before mentioned, like a cravat, is now to be laid along the top of the thigh, so that its middle will be just above the knee, where it is to be well secured by many turns of a bandage. The two ends are then to be knotted. If you have no pullies, a twisted sheet or rope may be passed through the loop formed by the towels. If you can obtain the former, it is better. Cast the loop over the hook of the lower block, and secure the upper one to the wall, directly opposite to the hooks or men that hold the sheets which pass between the thighs. A steadily increasing and forcible extension of the thigh, is then to be made by the men who are stationed at the pullies or sheet, while you are turning and twisting the limb to assist in dislodging it from its unnatural situation. By these means, properly applied, the head of the bone will frequently slip into the socket with considerable noise.

Should you be unable to succeed, change the direction of the extending force, recollecting always, that it is not by sudden and violent jerks that it can be put in place, but by a steady, increasing and continued pull. Should all your efforts prove unavailing (I would not advise you to loose much time before you resort to it) make your patient, as before directed, submit in such cases to lsoos of blood, by which means in those difficult cases you are to succeed.

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#### DISLOCATION OF THE KNEE PAN.

If this small bone is dislocated, you will perceive it at once by the slightest glance. Now to reduce it lay your patient on his back, straighten the leg, lift it up to a right angle with his body, and in that position push the bone back to its proper place. Then keep the knee at perfect rest on a pillow for a few days.

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#### DISLOCATION OF THE LEG.

Accidents of this kind cannot happen without tearing and lacerating the soft parts; but little force is required



to place the bones in their proper situation. Should the parts be so much torn that the bones slip again out of place, you had better apply Hartshorn's or Desault's apparatus, which I fully described to you for fractured thigh.

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#### DISLOCATION OF THE FOOT.

Dislocation of the foot seldom takes place. It however may occur; therefore I will give you the treatment. Let one secure the leg, and another draw the foot, while you push the bone in the contrary way to that in which it was forced out. Then you are to cover it with folds of linen dipped in water in which sugar of lead has been dissolved, and apply a splint on each side of the leg, so that it reaches below the foot.—An accident of this nature is highly dangerous, requiring the immediate assistance of a skilful physician; as even then, all that can be done to remedy them is in the speedy reduction of the bone, keeping the parts on a pillow at rest, and subduing inflammation by bleeding, low diet, and all such directions as already given to subdue fever.

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#### OF COMPOUND ACCIDENTS.

I have fully, and as plainly as I could, before told you how to treat accidents of this kind, and what plan you are to pursue when single; it now remains for me to state to you what is to be done when they are united.

For instance, an accident happens by which a man is thrown from a height. On examination, a wound is found in his thigh—it is bleeding profusely, his ankle on examination is out of joint, with a wound communicating with a cavity, and his leg broken. In the first place stop the bleeding from the wound, then reduce the dislocation next, then draw the edges of the wound together with sticking plaster and lastly apply to the fracture Hartshorn's or Desault's apparatus, which I have so fully explained before, that any carpenter can construct it for you.

## AMPUTATION.

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This means the cutting off a limb, or other part of the body. How often do those accidents happen where there is no physician or regular surgical assistance, (often at sea, or at a distance in the country,) and the limb requiring immediate amputation, or cutting off.—The only difficulty, I confess to you, is to know when this operation ought to be performed; for it is sometimes the case, that the most skilful surgeon is mistaken, or at a stand whether he shall operate or not. I do know several cases that have been preserved by the obstinacy of the patient, refusing to have the operation performed. But this was running a great hazard of life, and should be in all such cases ventured upon with due caution—and the operation ought not to be performed unless under the most careful and sound judgment.—Now, to perform this operation, requires nothing but firmness and common dexterity, for any man, and that too, to perform it well. Although, as I have told you, there are many doubts whether an amputation should take place or not, yet in others, all difficulty vanishes; as for instance, when a ball has carried away an arm; or during a storm, a tree happens to fall and mash the knee, the leg or ankle, so that those parts are greatly lacerated, or torn, and the blood vessels are severely lacerated, also nerves and tendons; or the crushing or splintering of the bones, almost necessarily resulting from such accidents, render immediate amputation an unavoidable and imperious duty. Now you will ask, what shall I do for instruments with which to perform this operation? If it is difficult to obtain surgical instruments, which is often the case in the country or at sea, it is no of consequence. The instruments for this purpose, are few and easily obtained, which, in all cases, will answer as a valuable substitute.

First, get a large carving knife, with a straight blade--- have the knife, as sharp and smooth as possible—a pen-knife—a carpenter's tenon, or mitre saw, a slip of leather or linen, three inches wide, and twenty inches long, slit up the middle to the half of its length—a dozen or more of ligatures, each about a foot long, made of waxed thread or fine twine—a hook with a sharp point, or a shoemaker's crooked awl will answer,---a pair of slender pincers—several narrow strips of sticking plaster, called by physicians or surgeon's adhesive plaster, or adhesive strip—some dry lint—a piece of old linen, large enough to cover the end of the stump, spread with simple ointment or lard—a bandage three or four yards long, about the width of your hand—a piece of sponge, and some warm water. You are now prepared fully to perform amputation; which I will so plainly explain, that any man, unless he is an idiot or an absolute fool, can perform this operation.

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#### AMPUTATION OF THE ARM.

*How to perform the operation.*—Give the patient about half an hour before you intend operating, six drops of laudanum; now having all things in readiness, seat him on a narrow and firm table or chest, of a convenient height; he is now to be supported by an assistant, by clasping him round the body. If the handkerchief and stick have not been previously applied, place it as high up on the arm as possible, (the stick being very short,) and so that the knot may pass on the inner side of it. Your instruments having been placed regularly on the table, and within reach of your hand, while some one supports the lower end of the arm, and at the same time draws down the skin, take the large knife and make one straight cut all round the limb through the skin and fat only; then with the pen-knife separate as much of the skin from the flesh above the cut, and all round it, as will form a flap to cover the face or end of the stump; when you think there is enough separated, turn it back, where it must be held by an assistant, while



with the large knife you make a second straight incision round the arm and down to the bone, as close as you can to the doubled edge of the flap, but taking great care not to cut it. The bone is now to be passed through the slit in the piece of linen before mentioned, and pressed by its ends against the upper surface of the wound by the person who holds the flap, while you saw through the bone as near to it as you can. With the hooks or pincers you then seize and tie up every vessel that bleeds, the largest the first and the smaller ones next, until they are all secured. When this is done relax the stick a little—if any artery spirts blood, tie it as before directed.

The wound is now to be gently and very carefully cleansed with a sponge and warm water, and the stick to be relaxed. If it is evident that the arteries are all tied, bring the flap over the end of the stump, draw then the edges together with strips of sticking plaster, leaving the ligatures hanging out at the angles. Lay the piece of linen, spread with simple ointment of hog's lard over the straps, and a fold or pledget of lint over that, and secure the whole by the bandage. Then put your patient to bed, and rest the stump on a pillow. The handkerchief and stick are to be left loosely round the limb, so that if any bleeding happens to come on, it may be tightened at once, by the person who watches by the patient. If this accident should take place by which I mean the bleeding, the dressings are to be taken off, the flap raised, and the bleeding vessel sought for and tied up; after which, every thing is to be placed as before. I have mentioned a handkerchief and stick; these are substitutes for the instrument used by surgeons called a tourniquet. Remember in sawing through the bone, a long and free stroke should be used to prevent any hitching; as an additional security against which, the teeth of the saw should be well sharpened and set wide.

It is of the greatest importance to attend to this circumstance. The ends of divided arteries cannot at the time of operation be got hold of: or being in a diseased state, their coats give way under the hook; so that it is impossible to draw them out, and not unfrequently they are found ossified, which means turned into bone. In



all such cases, having threaded a needle with a ligature well waxed, pass it through the flesh round the artery, so that when tied, there will be a portion of it included in the ligature along with the artery. The needle used by surgeons for this purpose is a curved or crooked one; but a straight one will answer. When the ligature has been made to encircle the artery, cut off the needle and tie it firmly in the ordinary way.

The dressings should not be removed for several days, say from five to seven, if the weather is cool; but if warm weather, it should be removed in three days. But this you must do with great care, after soaking it well with warm water, so that you can take it away without its sticking to the stump, bleeding or otherwise producing pain. Then apply a clean plaster of lint, over which put a bandage as before directed;—which dressing is to be removed, and a fresh one applied every two days. In about fourteen or sixteen days the ligatures will generally come away; and in from three to five weeks, if all goes on as might be expected, without any accident, the wound is well.

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### AMPUTATION OF THE THIGH.

Amputation of the thigh is to be performed in the same manner as that of the arm, with one exception, it being proper to put a piece of lint between the edges of the flap, to prevent them from uniting until the surface of the stump has adhered to it.

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### AMPUTATION OF THE LEG.

There are two bones in the leg, which have a thin muscle between. In such a case you must have an additional knife to those I have before mentioned to divide it. The knife required for this purpose must have a long narrow blade, with a double cutting edge, and a sharp point. You can grind down a carving or a case knife to answer every purpose, the blade however must

be reduced to less than half an inch in width. The linen or leather strip should also have two slits in it instead of one. Having all your preparations in order near you, your patient is to be laid on his back, on a table covered with a blanket, or on a hard bed, with as many persons as may be necessary to hold him. The handkerchief and stick are then to be applied on the upper part of the thigh. One person holds the knee, and another the foot and leg as firmly as possible, while with the large knife the operator makes an oblique incision round the limb, through the skin, and beginning at five or six inches below the knee pan, and carrying it regularly round in such a manner that the cut will be lower down on the calf than in front of the leg. As much of the skin is then to be separated by the pen-knife as will cover the stump. It is here important for you to take the principal part of the flap from the hinder part of the leg; for the cut to be made as directed, it should require only one inch of skin to be raised in front, and of course you must take enough from behind to meet it. When this is turned back, a second cut is to be made all round the limb and down to the bones; when with the narrow bladed knife before mentioned, the flesh between them is to be divided. The middle piece of the leather strip is now to be pulled through between the bones, the whole being held back by the assistant who supports the flap while the bones are sawed—which should be so managed that the smaller one is cut through by the time the other is only half off. The arteries are then to be taken up, the flap brought down, and secured by adhesive plaster with bandages as I have before plainly explained to you.

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#### AMPUTATION OF THE FORE-ARM.

The fore-arm has two bones in it; therefore, you require in this operation the narrow bladed knife, and the strip of linen with three tails. Let the incision be made straight round the part, as in the arm; with this exception, complete it as I gave you directions in the case before this.

## AMPUTATION OF THE FINGERS AND TOES.

When amputations of this kind are made, you must draw the skin back, and make an incision round the finger a little below the joint it is intended to remove; turn back a little flap to cover the stump, then cut down to the joint, bleeding it so that you can cut through the ligatures that connects the two bones—the under one first, then that on the side. The head of the bone is to be turned out, while you cut through the remaining soft parts. Should you see an artery spurt out the blood, immediately tie it up; if not, bring down the flap, and secure it by a strip of sticking plaster. And then put a narrow bandage over the whole.

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## CONCLUDING REMARKS ON AMPUTATION.

It often happens in cases of amputation that the wound is apt to bleed, after you have dressed it—thereby giving you considerable trouble. This is called by surgeons secondary bleeding. Therefore, to prevent this, if necessary, before the strips of plaster are applied to the edges of the flap, give a little wine and water or a little spirit and water, and wait a few moments to see whether the increased force it gives to the circulation, will occasion a flow of blood; if it does, secure the vessel it comes from. But should there be a considerable flow of blood from the hollow of the bone, make use of a small plug of cedar; and if violent spasms of the stump take place, hold it carefully by your assistants, and immediately administer large doses of laudanum; it may be understood as a general rule, that after every operation of the kind, laudanum must and ought to be given according to the sufferings of the patient.

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## MORTIFICATION.

In the general treatment of wounds and in surgery, remember always to stop excessive inflammation; which

if allowed to go to a certain point, frequently produces mortification, or the death of the parts. Therefore always be on your guard against fever—which you may easily know, by heat, pain, redness and swelling. Now I again repeat that you must bleed and purge as much as you think your patient may be able to bear, from his situation, constitution, &c. &c. These matters are to be entirely regulated by the appearances at the time. If the fever and pain should suddenly cease, and the part which before was red, swollen and hard, becomes of a purple color and soft, you are to stop at once all reducing measures, put a large blister over all the parts, and give good wine, porter, barks, and wine or quinine, or other generous stimulants, so as to support the sinking condition of the patient, for mortification has or is about to commence; and should you find the blisters fail to put a stop to the disease, and the parts look dead and become offensive, cover them with charcoal, or fermenting poultices, until nature separates the dead parts from the living, during which time give a free, generous, and strengthening diet and good wine.

In mortification of the fore-arm, it frequently becomes necessary to amputate. This ought never to be done until after blisters have been fairly tried to the sound parts, (above the mortified,) as they often separate, you should be careful to examine strictly the parts, so as to discover in time, that which may be necessary.

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#### DIRECTIONS FOR CATHETER.

A catheter is a surgical instrument made use of for drawing the water from the bladder. There are two kinds, male and female. The difference between them is very little. The female is shorter than the male, and but slightly curved, whereas the male catheter is longer and more curved; sometimes there is only one hole in the end of the male catheter, but often they are made with many holes in the end like the female catheter.—By this simple operation which any man of common sense can perform, the lives of thousands have been pre-



served—and this is one among the many reasons I could advance for having explained the outward parts of female generation so plainly. Now many fools say I ought to have left out an explanation of these parts.—And why do they say so? Because they do not read the book, so as to see the necessity of writing so plain. Are we ashamed of the parts which the diseases of our nature require to be explained, so as to obtain relief in cases of disease? I am writing a book not for the learned but for the unlearned, not for amusement, but to explain, in plain language, the diseases to which we are subjected, and the method to obtain relief from pain and sickness. With these remarks I shall proceed.

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#### THE METHOD OF USING THE CATHETER.

The patient should be placed on his back with his knees drawn up. The operator standing on the patient's left side, will lay hold of the penis with his left hand, and will take the catheter in his right hand, the upper part or handle should be turned towards his knees or feet almost in a right line with his body, he then introduces the catheter into the urethra and carrying it down until it passes the bone in point or pubus, then gently turning the handle round, the knees being extended or widened, to suffer the hand with the instrument to pass towards the patient's belly gradually and gently, elevating the handle, the instrument easily passes into the bladder and the water flows.

## THE NURSE'S GUIDE.

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In the preliminary observations of this work, we stated facts illustrative of the important advantages resulting from good nursing and dieting. The frequent occurrence of fatal effects when this is neglected, imperiously demands that I should present to my readers the most approved rules which ought to be understood by every nurse, as well as to exhibit the mode of preparing such aliments as are most proper for the sick; in order that the trammels of ignorance in nurses, if possible, may be broken, and simplicity of diet and general management become an increased object of our attention.

*Duty of a Nurse.*—Before we proceed farther on this subject, it may be necessary to observe, that none should be nurses unless they possess *honesty, sobriety, and fidelity*. The more equal and cheerful they are in their dispositions, the better, provided they keep at their proper distance, and never incommode the patient with idle chit chat, or any thing that can occasion sudden alarm. They ought to be expert in the execution of their office, yet without bustle or noise; the track being easily kept when once got into, and the objects to be attended to but few.

The office of a nurse, however trifling it may appear, if well known and rightly performed, is unquestionably of great benefit to mankind. To prove this fact, it is only necessary to appeal to every skilful physician, whether, when the plan prescribed by him has been punctually observed, he has not commonly seen the disease either yielding readily to the remedies, or terminating in its usual period, without any mysterious or difficult symptoms arising through the course of it. Whereas, on the contrary, when his plan has been altered, as

for instance, when the medicine has not been taken at the appointed time; when improper diet has been given instead of that directed; when the air in the rooms and many other circumstances have been improperly attended to, whether he has not then known the disease to be either aggravated, or diverted from its course, often terminating fatally; when, if no such error had been committed, there was the highest probability of the patient's recovery.

*Air and Treatment.*—It being a well known fact that the life of every animal depends as much on air as on diet; and its health also as much on the goodness of the former, as on that of the latter, care should be taken what sort of rooms we sleep in, but more especially so when confined by sickness.

It is a misfortune that the poor as well as the slaves are constrained, from necessity, to sleep in low dwellings, and many of them in the same room, by which due attention is not generally paid to cleanliness; hence the air becomes impure and extremely offensive. Others again accustom themselves, sick or well, to the curtains drawn. This is equally detrimental to health, for the air being thus confined, becomes contaminated, and so offensive as to be disagreeable to any one entering the room from the fresh air. How much more so then must this be the case in sickness, which tends greatly to destroy its purity.

In warm weather it is necessary to keep a window open day and night, during the whole course of the disease; but in this case the nurse must take care that the patient is not exposed to either a damp or violent current of air. Whenever a fire is required, it should be kept up, and regulated according to the nature of the disease, and state of the weather. The room being brought to a due heat, should never be suffered to cool suddenly; for the air ought to be kept as temperate as possible.

When the general exhaustion is great, the temperature of the apartment should not by any means be permitted to be so low as to endanger an attack of chilli-

ness; as in this case a rapid reduction of the animal heat may speedily be fatal, by sinking the heart's action. In some instances an exposure to the cold air, in getting up to the night-chair, has been the cause of a shivering fit, under which the patient died in a few hours; but death will rarely happen, if some warm stimulant be immediately administered internally, and sufficient warmth applied to the extreme parts of the body.

*Chills and Fevers.*—It is too prevailing a custom in the cold fit of an ague, or when the patient complains of chilliness, for the attendants to heap great loads of bed clothes, which never fail to produce difficult or oppressed respiration. In such cases, warmth should be restored by applying warm flannels to the stomach and abdomen, and the same or warm bricks to the feet. Recourse should also be had to friction with a flesh brush or flannel on the extremities.

It is vulgarly imagined that it is absolutely necessary to promote perspiration, and under this absurd idea, heating and stimulating drinks are given by way of cordials, which readily induce delirium or a more obstinate fever. The fact is this, when the pulse is quick and the body hot, sweat can only be induced by lessening the action of the pulse, and heat of the body. And this can only be accomplished by strict observation of a cooling regimen.

In some cases, it is necessary that the sick person should be kept out of bed as much as possible, and placed so as to face the current of air; the body being defended sufficiently by the clothing to prevent any inconvenience being experienced. It should be recollected, however, as we have already noticed, that in the stage of collapse, or when the exhaustion is great, this practice is not admissable. But there is much less reason to fear this practice will be too frequently adopted, than that it will be neglected, in those cases in which it is recommended. For, too often, in this point, are the wishes of the physician opposed, and his directions disobeyed; the languor of the patient, and the unwillingness to be removed, with the prejudices against



a practice so novel, forming, very often, almost insuperable obstacles. Indeed, it is very difficult to persuade those who have not witnessed the effects resulting from this mode of practice, that it is not necessary for every person in a fever to be kept closely confined to his bed under a weight of bed-clothes, and supplied with heating drinks. It frequently happens, therefore, that no sooner has a physician left the room, than the patient is supplied with warm liquors, the windows and curtains are closed, and the bed-clothes, which had been removed, are replaced. Such opposition to the directions of a physician, viewed in the most favorable light, is highly censurable; being, in a great measure, the effect of ignorance, it is all that prevents it from being really criminal.

Nurses should, therefore, be on their guard; and neither deviate themselves from the rules laid down, nor permit any person at the expense of the patient's life to interfere with what might be considered their duty, otherwise their conscience will upbraid them as murderers.

It is to be hoped, by means of this treatise, ignorance will no longer be a cloak for omissions, and that one uniform method will be attained in the management of the sick, which will unquestionably be of vast importance to mankind.

*Cleanliness.*—It is certainly of great moment to the sick to have their bed and bedding kept clean as possible, and their linen frequently changed, that it may not become foul or offensive. Such of the bed-clothes as are not changed, should, in a disease of a putrid nature, be exposed to a current of air, since, by their known captivity for retaining effluvia, they may become so loaded with contagious or putrid matter, as to prevent infections to the attendants, and perhaps to impede the recovery of the patient.

In summer it is much more healthy to sleep on mattresses than feather beds, which are apt to make persons become faint and languid. The best materials for making mattresses are clean horse-hair, Carolina moss properly cured, corn husks split, or straw.

When a bed is unsettled, or a patient's head uncomfortably low, or when his feet are pushed from under the bed-clothes, he should be raised in bed, and the bed, bolster, and covering, shook up and smoothed.

The patient's face and hands are to be washed every morning. And when he is no longer able to assist himself, his face, breast, hands, and arms, must be frequently sponged with vinegar and water. The floor should be kept clean and occasionally sprinkled with vinegar, particularly before it is swept, and on no account should any thing the least offensive be suffered to remain in the room.

It is also the duty of the nurse to pay great attention to the state of the patient's mouth. When his tongue and gums are covered with a brown or dark crust, she must wipe them with a bit of flannel, moistened with salt and water, two or three times a day; or, if this can not be accomplished, she must put a thin slice of lemon, without the rind, in his mouth. The patient is often unable to swallow, from the dry and shrivelled state of his tongue; in such cases, the nurse, before offering him drink, should put a teaspoonful of lemon-juice and water, or vinegar sweetened, into his mouth; after which, the scum upon his tongue will become softened in a minute or two, and then he will drink with ease.

*Delirium.*—When, during great derangement of mind, a patient insists upon leaving his bed, the nurse must endeavor to calm him; or, if that should fail, she may speak with authority, but she is not on any account to use forcible restraint. The nurse must wrap his legs in a blanket, put on his bed gown, or cover his shoulders, and permit him to sit on his bed, or even to go to the fire, till the violence of his derangement shall abate. When indulged in this way, he will, in general, soon return to the bed of his own accord. In the putrid fever, delirium is one of the most constant and alarming symptoms, and the removal of it depends much upon the nurse or attendants. We have seen a temporary stop put to the patient's raving, by making him drink, or upon his discharging his urine or fæces: for

being then unconscious of thirst or other natural wants, he is, therefore, ignorant of the means of satisfying them; and when he does so, he fancies he is about something else, which is the subject of his delirious thoughts. This observation leads to a material practical purpose; for it follows from it, that unremitting attention should be given to the patient's feelings, and all his possible wants, as those natural notices, and instinctive cravings, which occur in health, are now wanting, in consequence of the depraved state of sensation.

The following excellent passage will be found in Levant's Chapter on the Synochus Putris (Nervous Fever.) As soon as the delirium comes on, the pain subsides, or at least the patient does not complain of pain, nor seem to feel any; but replies in a hurried manner, when asked how he does, that he is very well; according to the observation of a French physician, "*Quand le malade repend, je me porte bein, ce seul mot suffit, il n'est pas a' lui.*" "When the patient answers that he is *very well*, this alone convinces me," says Dr. Cheyne, of Dublin, "that he is no longer himself. In all these cases, the patient endeavors to get out of bed, to sit up, or even to walk about from one room to another; but, unhappily, the attendants are solicitous to confine him to bed, and to load him with bed-clothes; nay, he is frequently kept struggling for two or three days together, with two strong people lying upon him continually.-- Now, to prevent all this misery, I know no method equal to what is here recommended; namely, let the patient have his clothes put on, and be placed in an easy chair; let his head be shaved, washed with vinegar, and covered with a linen cap. When he is tired of the erect position, let him lie along on a couch, or upon the bed with his head high. Let his diet be cooling, and his body kept open by clysters, repeated occasionally. Let this method be persisted in till his delirium goes off; or till the pulse subsides, and he seems exhausted; then, perhaps, he will begin to doze, or slumber on his chair, which will do no harm, and when he is inclined to go into bed, let him lie down. "By this method," adds Dr.



C., "I have recovered great numbers of persons, when I was suffered to conduct them in the hospital; and I do believe some have perished by an opposite treatment, who might have been saved."

*Medicine.*—Although it be admitted, the cure of diseases depends very much upon the right choice of medicines; yet, it cannot reasonably be expected that these will produce the desired effect unless they be punctually taken, agreeably to the directions given.

It has oftentimes occurred, that when aperient powders containing calomel have been prescribed, and directions given that they should be administered in syrup or molasses, the physician, on making the necessary inquiry on the following day, has been told by the nurse that they had no effect upon the bowels. "How was the medicine given?" "In tea, sir." "Why was it not administered agreeably to instructions?" "Because the patient preferred taking it in a liquid, and I thought it would answer as well." By thus changing the vehicle, the calomel, being heavier than the tea, was left at the bottom of the spoon, and, as it was not swallowed, could not, of course, have any purgative effect. In like manner, the patient or nurse frequently thwarts the intention of the physician by making use of the medicines prescribed, irregularly; so that if there be any particular action to be kept up on the system, it is rendered abortive, and blame cast where it should not rest. It is not unusual for medicines, though ever so well adapted to the case, to excite nausea and retchings immediately after each dose has been taken. Hence, a prejudice arises directly against the medicine, which being taken for the cause, it is condemned and set aside. The consequence is, the disease becomes more aggravated. Cases may happen, wherein if but one medicine be neglected it can never be administered again properly; and, consequently, the patient may either be lost, or greatly injured. It is, therefore, the duty of the nurse, when a physician prescribes in whom confidence can be placed, strictly to adhere to the curative process he selects, as without such attention *Æsculapius* himself might fail.



It commonly occurs, through the course of many diseases, particularly fevers, that the patient has little or no inclination to eat, till nature has gained the victory. But this not being rightly understood by either him or his attendants, an outcry is made that he will never have an appetite whilst he takes medicine. Hence the remedies are discontinued; yet the appetite does not recover, nor does the case grow better, but rather worse. The reason is obvious, if they would but only observe, that as the disease is cured, the appetite in consequence will revive.

Again, it not unfrequently happens in diseases which are obstinate, requiring a long course of medicines, that the patient becomes impatient and discontinues the use of the remedies. And in such cases, it is too common, that the patient becomes prejudiced against his physician and mistrusts his ability wholly, though perhaps he has been conducted by him through the most difficult stages of his illness, and commonly sends for another, who, if not so honest as to undeceive him, enjoys the honor that was due to the former.

By these observations we do not mean to screen any unskilful or improper use that may be made of medicine, or to raise it into higher esteem than what it deserves; on the contrary, it will ever be found that *he who knows his business best, will make it his constant care to heal with fewest medicines; and will always be most ready to resign his patient to diet alone, as soon as he knows it can be done with safety.*

During a long spell of sickness it not unfrequently occurs, that *good-natured friends* are in the habit of recommending *nostrums*, each on the supposition that his own is infallible. When the patients are credulous, as is too often the case in lingering diseases, they readily grasp at any relief, however monstrous the proposition may appear: the consequence is, that in nineteen cases out of twenty, the medicaments of which they are composed are utterly unfit for the disease, and, consequently, prove deleterious in their effects.

It too frequently occurs that insuperable difficulties of another kind arise. For, there are some persons bred

up with strong prejudices, and an excessive like or dislike of certain things, and cannot easily be persuaded to comply with what is thought the most proper method of cure; namely, a particular regimen, bleeding, vomiting, &c. And thus their lives are often lost, or if they survive, the future period of their existence is rendered very miserable by some consequent disease remaining fixed in the constitution. Again, we often find, with respect to children who have been much indulged, when the physician ascertains the nature of the disease, and prescribes, suitably to the case, he will very likely be told by the parents, if he expects any medicine to be gotten down, it must either be nicely flavored, or absolutely without taste. Or, should he advise topical bleeding by leeches, he will more than probably be told, however necessary their application may be, it is a remedy which must be declined, for the very sight of them would throw the child into convulsions. And, as to a blister, the infliction of this torture on such delicate skin could not be endured; for as soon as any pain from its action was produced, it would be directly torn off. Placed under such limitations, it cannot be expected, however capable and anxious the physician may be to procure relief to his patient, that much advantage can be obtained from his prescriptions. He, therefore, either declines his attendance, or acting within the bounds to which he is limited, he does little more than alleviate some of the more distressing symptoms, whilst he has the mortification to witness the almost uninterrupted progress of the disease.

*Leeches.*—As these little animals are depended on for the removal of very dangerous diseases, and as they often seem capriciously determined to resist the endeavors made to cause them to adhere, it will be very proper to give a few directions, by which their assistance may, with more certainty, be obtained.

This useful ally to the physician, it may be remarked, is as little fond of the taste of physic as the physician can be himself. The introducing of a hand, to which any ill-flavored medicine adheres, into the water they

are kept, will be often sufficient to deprive them of life; the application of a small quantity of any saline matter to their skin, immediately occasions the expulsion of the contents of their stomach; and, what is most to our present purpose, the least medicament that has been applied, remaining on the skin, or even the accumulation of the matter of perspiration, will prevent them from fastening. The skin should, previously to their application, be very carefully cleansed from any foulness, and moistened with a little milk.

The best mode of applying them is by retaining them to the skin in a small wine-glass, or the bottom of a large pill box, when they will, in general, in a little time, fasten themselves to the skin. On their removal, the rejection of the blood they have drawn may be obtained by the application of salt externally; but here, for the sake of those to whom we are so much indebted, it may be necessary to remark, that a few grains of salt are sufficient for this purpose; and that covering them with it, as is sometimes done by nurses, generally destroys them. It sometimes happens, that the blood will continue to flow from the orifice made by a leech longer than is desirable; and, sometimes, children have been nearly lost from the inability of the attendants to suppress the discharge. In such cases, the blood should be washed off clean, and the point of the finger pressed moderately hard on the orifice, when the blood will cease to flow. A small compress may then be applied to the wound, which may be retained by the point of the finger as long as the blood appears upon withdrawing the pressure; remembering that no more blood need be suffered to flow, than is thought necessary; since all that is required to prevent it, is patiently to persevere in the necessary pressure.

It sometimes occurs, on the application of leeches to the fundament, in order to relieve the piles, that they get into the rectum. If that accident should happen, an injection of a solution of common salt is the proper remedy; but the animal is soon gorged, and they may be destroyed.

*Clysters.*—As the use of clysters is also of great im-



portance in the cure of many diseases, and as nurses are not always conversant, even in this part of their office, it may be proper to give some directions relative to the administration of them, which may be done in the following manner: the bed being prepared with a sufficiency of clothing to keep it dry, the patient must be placed on the side across it, with the knees forward, and then covered decently: the clyster being likewise prepared, and brought to that moderate heat called milk warm, must be poured into the bladder and secured by tying the opening; which being done and the pipe anointed, the whole must be placed in the bed near to the patient. The nurse must now pass the point of her left forefinger, the nail being cut short, close to the anus, or a little within it, and then slide the pipe along this finger, till the greatest part of it be entirely introduced. In doing this, the pipe must be directed a little backwards, taking care not to push it against any part so as to cause pain. When thus introduced, its outer end must be held fast with one hand, whilst with the other she takes hold of the string, and pulls out the cork; which done, the bladder must be grasped with both hands, and the contents forced up, keeping the pipe in its place at the same time. When the clyster has been pressed out of the bladder, the pipe must be instantly withdrawn.

A large pewter syringe is more convenient to administer an injection; and some of them are so constructed that the patient may use it himself.

*Diet.*—In the cure of diseases, experience proves how much depends upon the choice and administration of diet. We see one series of disorders, wherein the appetite, either from a bad habit or some morbid effect, craves such things chiefly as have a tendency to heighten the disease. Another series, in which the whole fabric being fully engaged and struggling with the disease in order to conquer it, the stomach, till in that conflict nature gets the better, loathes every kind of aliment, except such as is fluid. And we see in the third class, the stomach not affected, but dispensing with all



kinds of food. Yet these being taken indiscriminately, the disease is not only nursed, but the medicines usually the most efficacious in curing it, are rendered entirely ineffectual.

The nurse should, therefore, be extremely cautious how she deviates from the diet which has been prescribed, as fatal consequences may arise from what may seem to have been but a trifling variation.

The stomach must never be oppressed with much at a time, about half a pint being enough, and that should be repeated only as nature indicates. This will, generally, be known by the patient's desires or dislike of it. We say generally, for in some cases where there is great weakness, insensibility, or both, the patient may not be able to give such indication. And there are cases, especially fever that terminates badly, where the patient's thirst is insatiable. In either of these exigencies, the nurse must proceed with discretion; that is, in the former she must rouse the patient every hour or two, and give a cupful or half a pint of such drink as directed; and, in the latter, she must give drink more frequently, but small quantities at a time. But it should be observed that, whenever patients fall into tranquil slumber, they should hardly ever be disturbed to give them drink or food until five or six hours shall have elapsed. Such a repose is most desirable, and will, sometimes, renovate nature, when her faculties had before seemed prostrate beyond the power of recovery.

It is a vulgar error, and a very common one too, that a sick person is to be supported by rich broths, by pastry, or by solids. The outcry is, that the doctor will starve him.

Hence a variety of dishes is prepared to tempt the stomach to take food, and, in order to provoke the appetite, pickles are frequently given. The patient, from the extreme kindness of friends or officiousness of the nurse, is teased with repeated urging, *try to take a little more*, until the stomach has received so much as to produce effects directly opposite to those intended. Even after the disease is conquered, and the appetite begins to crave, it is always advisable to feed the pa-

tient sparingly for several days. Unlimited indulgence in the article of food, is a source from which a multitude of diseases arises in health; then how much more deleterious in its effects, must this be the case in a state of convalescence.

At this crisis, it is, indeed, a nice point to avoid giving the patient too much or too little nourishment; but even here, perhaps, excess is the most dangerous extreme.—Great anxiety to prevent the sick from sinking, often induces their attendant's and friends to give much more food than can possibly be digested, and it often lies as an offensive load upon the stomach, or induces an exhausting vomiting or diarrhœa. When the weakened condition of the digestion or assimilative organs are considered, it cannot but appear, even from that reason, that small portions of plain, simple food, given at stated intervals, will best support the remaining strength of the system, and this is readily confirmed by experience.

In preparing all kinds of aliment, it is essentially necessary to be very cleanly, but more especially in that for sick people, the stomach being often so greatly weakened and disordered by the disease, as to render it difficult to find out by way of diet, what is agreeable to the natural powers, and suitable to the case.

The nurse, who ought to be the cook, with respect to this part of diet, may select, from the articles enumerated for the sick, such aliments as are suitable for the case. It is advisable that a choice be made of the things most likely to agree with the patient, that a change be provided, as invalids require variety; and that they should succeed each other in different forms.

*Conclusion.* I believe I have now completed the task that was allotted me, and sincerely hope, notwithstanding its imperfections, that it will be productive of much comfort and good. So long as sickness is a concomitant of humanity, so long will a work of this kind retain its estimation. By persons in health, the possession of such a book may not be sufficiently prized; but when sickness finds access to a beloved wife or child, it will doubtless be read with pleasure, and considered in

reality a valuable and acceptable companion for the sick chamber.

It is not to one description of persons alone that the "Family Physician," will prove useful, but to every class of society. Many families are ignorant even of the mode to prepare the various articles of diet suitable for the sick, and, with such, this part of the work, as a Family Assistant, must be of incalculable value. To the inquisitive mind, the attentive perusal of this book, from the beginning to the end, will be found to contain so many interesting facts, as will not fail to prove a source of rational and instructive entertainment.

To diffuse medical knowledge, is the most effectual mode of checking the career of empiricism; and, indeed, so obvious is this, that it is surprising to find heads of families pay so little attention to the perusal of books of this kind, wherein they might obtain such information as would enable them to detect ignorant pretenders in the healing art, as well as to afford them the very great satisfaction of rendering that assistance in the management of the sick, for which humanity often loudly calls. Such knowledge is also highly useful, on the one hand, in preventing unnecessary apprehension respecting symptoms by no means dangerous; and, on the other, in giving the alarm, where delay might be injurious or fatal. And, again, there are situations in which a little medical knowledge may be of essential consequence to the comfort, or even the life of the patient, before regular assistance could be procured.

## SYMPTOMS OF CHOLERA.

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The symptoms of this disease have been nearly the same in all countries. Some patients in all countries have experienced premonitory symptoms for some time, such as diarrhœa, nausea, and slight vomiting, and in all countries, some have been prostrated at once by the disease, as if by a blow, such become suddenly cold, the pulse ceases, and they expire in a short time.

The following have been among the most prominent and essential symptoms in all countries, immediate sinking of the circulation, coldness of the skin, tongue, vomiting, purging, and spasms, and a livid or blue or black color of the lips, and surface of the body. The skin of the hands and feet becomes corrugated and assumes a dark color, as if these membranes had been long soaked in blue dye, there is generally experienced great thirst, and a strong desire for cold water, or drinks even when the tongue and mouth are moist and cold, such were the symptoms of the cholera in India, in Russia, in England, and Canada, as described by medical gentlemen, who have lived in those countries, and have witnessed the disease, and such were the symptoms which I witnessed in Nashville, Tennessee; in fact there is a sameness in the disease, throughout the world, so far as we have had an opportunity of learning.

The history of the symptoms of the cholera in India, drawn by the Medical Board of Bengal, and by the Medical Board of Bombay, will demonstrate the disease to be the same. The attack, they say, was generally ushered in by a sense of weakness, trembling, giddiness, nausea, violent retching, vomiting and purging of a watery starchy whey-colored or greenish fluid.—These symptoms were accompanied or quickly followed by severe cramps, generally beginning in the fingers and toes, and thence extending to the wrists and fore-



arms, calves of the legs, thighs, abdomen, and lower parts of the thorax. These were soon succeeded by pain, constriction and oppression of the stomach and pericardium; a sense of great internal heat; inordinate thirst and incessant calls for cold water, which was no sooner swallowed than rejected, together with a quantity of phlegm or whitish fluid like seethings of oatmeal.—The action of the heart and arteries now nearly ceased; the pulse either becomes altogether imperceptible at the wrists and temples, or so weak as to give the finger only an indistinct feeling or fluttering. The respiration was laborious and hurried; sometimes with long and frequently broken inspirations. The skin grew cold and clammy, covered with large drops of sweat, dark and disagreeable to the feel, and discolored, of a bluish, purple or livid hue—there was great and sudden prostration of strength, anguish and agitation—the countenance becomes collapsed, the eyes suffused, fixed and glassy or heavy and dull, sunk in their sockets, and surrounded by dark circles, the cheeks and lips livid and bloodless; and the whole surface of the body nearly devoid of feeling. In feeble habits where the attack was exceedingly violent and unresisted by medicine, the scene was soon closed. The circulation and animal heat never returned, the vomiting and purging still continued with thirst and restlessness, the patient becomes delirious or insensible, with his eyes fixed in a vacant stare, and sunk down in the bed; the spasms increased generally within four or five hours. The disease sometimes at once, and as if it were momentarily, seized persons in perfect health, at other times, those who had been debilitated by previous bodily ailment, and individuals in the latter predicament, generally sunk under the attack, sometimes the stomach and bowels were disordered for some days before the attack; which would then come on in full force, and speedily reduce the patient to extremities.

Such was the general appearance of the disease when it cut off the patient in its earlier stages. The primary symptoms, however, in many cases admitted of considerable variety—sometimes the sickness and looseness were preceded by spasms, sometimes the patient sunk

at once, after passing off a small quantity of colored fluid by vomiting and stool. The matter vomited in the early stages, was in most cases colorless or milky; sometimes it was green. In like manner the stools were usually watery and muddy; sometimes red and bloody, and in a few cases they consisted of a greenish pulp, like half digested vegetables. The cramps usually began in the extremities, and thence gradually crept to the trunk; sometimes they were simultaneous in both; and sometimes the order of succession was reversed; the abdomen being first affected, then the hands and feet. These spasms hardly amounted to general convulsions, they seemed rather affections of individual muscles, causing thrilling and quivering in the affected parts, like the flesh of crimped saigon; and firmly stiffening and contorting the toes and fingers. The patient always complained of pain across the belly; which was generally painful to the touch, and sometimes hard and drawn back towards the spine. The burning sensation in the stomach and bowels, was always present, and at times extended along the cardia and œsophagus to the throat. The powers of voluntary motion were in every instance impaired. The patient staggered like a drunken man, or fell down like a helpless child, headache over one or both eyes, sometimes, but rarely occurred. The pulse, when to be felt, was generally regular, and extremely feeble, sometimes soft, not very quick; usually ranging from eighty to one hundred. In a few instances it rose to one hundred and forty or one hundred and fifty, shortly before death. Then it was distinct, small, feeble and irregular, sometimes very rapid, then slow for one or two beats. The urine at first generally limpid, and freely passed; sometimes scanty, with such difficulty as almost to strangury, and sometimes hardly secreted in any quantity, as if the kidneys had ceased to perform their office. In a few cases, the hands were tremulous. In others, the patient declared himself free from pain and uneasiness, when want of pulse, cold skin, and anxiety of features portend speedy death. The cramp was invariably increased upon moving.

The above history of the symptoms is taken from the

report of the Bengal Medical Board, as given to us by Dr. Brigham of New York. The Medical Board of Bombay has also given a history of the symptoms.

They say, the invasion of the cholera generally takes place in the night, or towards morning. The patient is sick at the stomach; he vomits its contents and his bowels are at the same time evacuated. This evacuation is of a nature quite peculiar to the disease; the entire intestinal tube seems to be at once emptied of its *fæcal* or solid matter; and an indiscrivable, but most subduing feeling of exhaustion, sinking, and emptiness is produced; faintness supervenes, the skin becomes cold, and there is frequently giddiness and ringing in the ears.—The powers of locomotion are generally soon arrested; spasmodic contractions, or twitching of the muscles of the fingers and toes are felt; and these affections gradually extend along the limbs, to the trunk of the body.—They partake both of the clonic and tonic spasm, but the clonic form chiefly prevails. The pulse, from the first, is small, weak, and accelerated; and after a certain interval, but especially on the accession of spasms, or of severe vomiting, it sinks suddenly, so as to be speedily lost in all the external parts. The skin, which, from the commencement, is below the natural temperature, becomes colder and colder. It is very rarely dry, generally covered with a profuse cold sweat, or with a clammy moisture. In Europeans, it often partially assumed a livid hue; the whole surface appeared collapsed, the lips became blue, the nails present a similar tint; and the skin of the feet and hands become much corrugated, and exhibits a sodden appearance. In this state the skin is insensible, even to the action of chemical agents; yet the patient generally complains of oppressive heat on the surface, and wishes to throw off the bed-clothes. The eyes sink in their orbits, which are surrounded by a livid circle, the corner or glass of the eye becomes flaccid, the conjunctiva is frequently suffused with blood; the features of the face collapse, and the whole countenance assumes a cadavarous aspect, strikingly characteristic of the disease. There is almost always urgent thirst, and a desire for cold drinks, al-



though the mouth be not usually parched. The tongue is moist, whitish, and cold. A distressing sense of pain and of burning heat at the epigastrium are common, little or no urine, bile, or saliva, is secreted. The voice becomes feeble, hollow, and unnatural, the respiration is oppressed, generally slow, and the breath is deficient in heat.

During the progress of these symptoms, the alimentary canal is very variously affected. After the first discharges by vomiting and purging, however severe these symptoms may be, the matter evacuated is always watery and in a great proportion of cases it is colorless, inodorous and often homogenous. In some it is turbid, resembling muddy water, in others it is of a yellowish or greenish hue. A very common appearance is that which has been emphatically called the conjee stools, an appearance produced by numerous mucous fleaks floating in the watery or serous part of the evacuation. The discharges from the stomach, and those from the bowels do not appear to differ, except in the former being mixed with the ingesta, neither the vomiting or purging are symptoms of long continuance. They are either obviated by art, or the body becomes unable to perform these violent actions.

If blood be drawn, it is always dark or almost black, very thick and generally of slow and difficult effusion. Towards the close of the attack, jacitation comes on with evident internal anxiety and distress; and death takes place often in ten or twelve hours, generally within eighteen or twenty hours from the commencement of the attack—during all this mortal struggle, and commotion in the body, the mind remains clear, and its functions undisturbed almost to the last moment of existence. The patient though sunk and overwhelmed, listless, averse to speak, and impatient of disturbance, still retains the power of thinking, and of expressing his thoughts as long as his organs are obedient to his will, such is the most ordinary course of cholera asphyxia, when its tendency to death is not checked by art—as has been before observed after the first emptying of the bowels, the discharges have been observed to be gen-



erally yellowish, turbid, frothy like yeast, and sometimes bloody. In some cases they are inodorous, in others they have a rank fleshy smell. But by far the most common, is that of pure serum so thin and colorless as not to stain the patient's linen. The quantity of clear watery fluid discharged, is sometimes very great.

Symptoms of Cholera in Russia, as given by Drs. Russel and Barry in a report made to the British Government. These gentlemen say we have but few opportunities of witnessing the presence of all the preliminary symptoms, some of these precede the complete seizure, by so short an interval, that the utmost diligence is scarcely sufficient to bring the patient and the physician together, after their occurrence before the disease is fully formed, they say however that diarrhœa, at first feculent with slight cramps in the legs, nausea, pain, or heat about the pit of the stomach gives the longest warning. Indeed, purging or ordinary diarrhœa has been frequently known to continue for one, two or more days, unaccompanied by any other remarkable symptom, until the patient is suddenly struck blue, and nearly lifeless.

When violent vertigo, sick stomach, nervous agitation, intermittent, slow or small pulse, cramps, beginning at the tips of the fingers and toes, and rapidly approaching the trunk, give the first warning; then there is scarcely an interval—vomiting or purging, or both these evacuations are of a liquid like rice water or whey, or barley water come on; the features become sharp and contracted, the eye sinks, the look is expressive of terror, wildness, and, as it were a consciousness on the part of the sufferer that the hand of death is upon him. The lips, the face, the neck, the hands, the feet, and soon the thighs, arms, and whole surface, assume a leaden, blue purple, black or deep brown tint, according to the complexion of the individual, varying in shade with the intensity of the attack. The fingers and toes are reduced at least a third in thickness, the skin and soft parts covering them are wrinkled, shriveled and folded, the nails put on a bluish pearl white, the larger superficial veins are marked by flat lines of a deeper black;

the pulse is either small as a thread, and scarcely vibrating, or else totally extinct. The skin is deadly cold, and often damp, the tongue always moist, often white and loaded, but feebly, and chilled like a bit of dead flesh. The voice is nearly gone, the respiration quick, irregular, and imperfectly performed—perspiration appears to be effected by and immense effort of the chest, the nose instead of expanding, collapse and stops the ingress of the air, expiration is quick and convulsive. The patient asks only for water, speaks in a plaintive whisper, and only by a word at a time, from not being able to retain air enough in his lungs for a sentence—he tosses incessantly from side to side, and complains of intolerable weight and anguish around his heart, he struggles for breath and often lays his hand on his stomach and chest to point out the seat of his agony. The secretion of urine is always totally suspended, never have we observed tears shed under these circumstances.

The cholera in England has maintained a striking resemblance to the disease in other countries. The severe vomiting and purging of peculiar characteristic secretions; the nausea, internal burning at the epigastrium, intolerable weight, anguish and oppression; the paroxysms of severe pain, commencing at the stomach and rapidly extending over the whole alimentary canal. The ardent thirst; the cramps; the deadly prostration, anxiety and dejection, the conscious feeling of the hand of death; the failing of the circulation and animal heat, the peculiar cold sweat, shrinking of the skin, and sub-jacent tissues, sharpening of the features, contraction of the fingers, the hollow sunken eye; the leaden aspect of the surface, particularly visible in the hands, feet, nails, lips and the circles around the mouth and eyes; the black thick blood often not to be attained; the difficult and slow respiration; cold breath and tongue; the whispering voice, the sudden invasion, speedy death, or a rapid recovery have all been witnessed in England as well as in Russia and on the banks of the Ganges.

The history of the symptoms of cholera at Montreal, as reported by Dr. Nelson, after a trifling diarrhœa of

several days duration, to a few hours only, nausea quickly followed by vomiting and an increase of diarrhœa would usher him into that stage of the disease which may be called the second mode of attack; and now the patient is affected with a slight blueness of the hands and face, sometimes accompanied by a distressing sensation of weight and burning in the stomach, rapidly followed by vomiting and diarrhœa, the thirst is intolerable, cramps in the limbs and about the pericardia, blueness quickly extending towards the trunk, loss of voice, &c., besides the intestinal canal and the skin, all other organs furnished no secretion. Tears, saliva and urine, the secretion of which, is totally suspended. As to tears the greatest anguish of dying in full possession of the intellect, surrounded by all that is at once endearing and affecting could not produce them—some complained of great pain and desire to make water, but the bladder contained no urine, and after death was found to be contracted to the smallest size. In this disease, there is every reason to believe that every species of secretion in all parts is abolished. Dr. Nelson very properly observes, that no known function of the intestinal mucus membrane could form matter like unto that discharged, and as there is no circulation going on in the skin, but rather a complete state of asphyxia, in that part there can be no secretion. We now naturally come to the question, says the Doctor, whence and how comes these discharges, on the skin certainly not from circulation, for there is none.

In the cases which have occurred at New York, and Albany the same symptoms, says Dr. Brigham, have been noticed, the second week in July, 1832, says the Doctor, I saw many cases of the disease in New York, in all of which the above symptoms were present.

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#### EXAMINATION AFTER DEATH.

Having now given a short sketch of the history and symptoms of cholera, I now proceed briefly to say



something on the appearance of the person after death. Indeed there has not been as much attention paid to that subject as could have been wished, and of which medical men have been sensible.

Notwithstanding the great uniformity in the symptoms of cholera as given by medical men in various countries; yet there does not appear the same degree of uniformity in the accounts given, of the appearance of bodies on dissection after death, by the few who have recorded their observations. They have been exceedingly variable, and often contradictory, and have thrown but little light on the pathology of the disease, or furnishing any important guidance as regards its treatment. This disagreement respecting the morbid appearance, has, in all probability, been owing to greater violence of the disease in one case than another, on account of the age, constitution, or habits of the patients, as well as the medicines administered. The Bengal Medical Report says, of those who died, it was believed that the bodies putrified sooner than those dying under ordinary circumstances. They state that the bodies of those who sunk in the earlier stages of the malady, exhibited hardly any unhealthy appearance, but of this I shall have occasion to remark upon hereafter.

In the bodies of those who had lived sometime after the commencement of the attack, the stomach was generally of a natural appearance externally, but in a very few cases the whole internal surface of the stomach was covered with coagulable Lymph, and in most cases the liver was enlarged, soft, light, and colored with greyish spots. In others, again, it was collapsed and flaccid, the gall bladder was without exception full of dark, green, or black bile; the spleen and thoracic viscera, were in general, healthy. The great venous vessels were usually gorged; the brain was generally natural in its appearance. The Medical Report of Madras, says, that the external appearance of European subjects who have sunk under cholera, closely resemble that which has been noticed as taking place during life.—The surface is livid, the solids are shrunk; the skin of the hands and feet is corrugated. There seems no suf-



sufficient evidence of any uncommon tendency in the body to putrefaction after death, nor any characteristic fœtor from the abdominal cavity. No particular morbid appearance has been found in any of the cavities of the body which are lined with serous membranes, as in these membranes themselves. The cavities of the pleura of the pericardium and of the peritonium have almost uniformly been found in a natural state. The lungs have not unfrequently been found in a natural state, even in cases where much oppression of respiration had existed previous to death, much more generally, however, they have been found either to be gorged with dark blood, so that they have lost their characteristic appearance, and have assumed more the appearance of liver or spleen; or they have been found to be in the opposite state that is, collapsed into an extremely small bulk, and lying in the cavity, on each side of the spine, leaving the cavity of the thorax nearly empty. The blood formed in the lungs has been always black. The stomach and intestines generally preserve their ordinary volume, but sometimes the stomach has been found lined with calomel! The intestinal canal is sometimes collapsed, but often found to be more or less filled with air, distended in some parts into bags or pouches, containing whitish, turbid, dark, or green colored fluid; and in others having the appearance of spastic constriction;—the latter however, is not common. No fæcal or other solid matter are found in the intestines, but very commonly large quantities of turbid fluid or serous matter are found in them. Traces of bile in the intestines, or any substance apparently descended from the stomach are extremely rare. The thoracic duct is stated to have been empty of chyle! the urinary bladder is found almost universally without urine! and very much contracted. The gall bladder is generally found gorged with bile, and in most cases is communicated freely with the intestine, viz: with the duodenum, but in a few cases the duct appeared to be constricted and the gall bladder was in a few cases flaccid. Dr. Alexander Gordon, a surgeon attached to the Bombay Presidency, says, the appearances of dead bodies were not uniform; yet he

goes on to describe the appearance generally similar to the above.

In England we are told, the dissection of subjects who died of cholera, have not been frequently performed, but so far as they have, the same general appearances have been observed as in other countries.

Notwithstanding what has been said, I hope I shall be able to show that the post mortem examinations do throw light on the character and nature of the disease, and point out the remedies in cholera.

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### TREATMENT OF CHOLERA.

I have here to observe, that the first case of cholera to which I was called in Nashville, occurred on the 3rd of December, 1832; the patient was a man about 60 years of age; this man was convalescent from fever, but was attacked about 12 or 1 o'clock in the night, with discharges from the bowels of a rice-water color, sick stomach, cramps, very slight, &c. On entering his chamber I found him without pulse at the wrist, cold skin, hands and feet, breathing hurried, great thirst, sensible of approaching death, died about 2 or 3 o'clock. I confess I was at a loss how to treat this case, and death closed this scene before I could do more than give some tincture of cinnamon and laudanum.

On the 4th of December, about 11 o'clock, I was called to Miss S., a child nine years old; I saw her about 12 o'clock. She had been in perfect health previous to the moment she was seized with puking and purging; the discharges from the bowels were copious and at first faecal matter; but they became watery and of a whitish color, then clear as common water, and immensely copious, so clear were the discharges that one of the physicians thought surely some of the servants had emptied spring water in the chamber; in a few hours death closed the scene of her sufferings. The death of this child greatly distressed me, and I thought intensely day and night on her case. At first she re-

refused to take any thing, except once or twice she was forced to take a little tincture of cinnamon, until she lost her pulse; she then took 20 grains of calomel, and as she sunk and became cold I gave her strong tincture of cayenne pepper.

On the 11th of December, I was called in the night to see a man aged about 50 or 60, intemperate in his habits, puking, purging with cramps and great thirst, pulse flickering and weak. I did not suffer him to be brought near the fire, and as the night was cool, as also, the morning; I had him exposed to the cool air by having him taken out of the house into the open air. I gave him lime-water and opium and kino; the discharges were copious and not unlike rice-water; about sun rise I saw one of the medical gentlemen of Nashville, riding at some distance from me; I waived my hand to him to come that way, which he did, and saw my patient; he was satisfied it was a severe case of cholera, said he must die, I thought so too as he was then in a state of collapse. I asked him to prescribe; he had nothing to suggest but what we had seen in cholera reports, which was calomel. I thought I would wait two hours, though continuing the lime-water and kino and opium. On my return to my patient in less than two hours I perceived him better; I therefore did not give the calomel, but continued my first prescription; he mended fast, got well and is so at present. I now believed that the idea I had formed relative to this complaint was correct. During my attendance on this patient, I was asked by the same physician whom I called to see my patient, to see one of his, and I believe his first cholera patient. The doctor informed me that he had given him calomel and had laid him close to the fire and used frictions all over with mercurial ointment, but he died that night. I communicated my ideas to several physicians freely, and courted objections to my views; among the number was Doctor John Shelby, of this city, for whom I have always entertained sentiments of very high esteem and respect, both as a physician and a gentleman. The doctor expressed himself towards my theory favorable as to its plausibility, as did some others.



Before I proceed to give any further details of my treatment to other patients, I will mention some of the most striking symptoms of the disease, as it occurred here. The sudden sinking of the circulation, which I think to be connected with the copious discharges from the bowels of whitish fluid. The sinking of, and finally loss of the pulse, the great thirst, the collapsed state, the shrivelled skin, the dark or black appearance, the absence of urine, the sinking of the features, the unearthly voice, &c., &c.

That the remote cause of the cholera is atmospherical cannot be doubted. But the proximate or immediate cause seems to me, to be a super-abundance of carbon, or it may be Nitrogen in the system, which makes it susceptible of an attack of cholera, when this carbon acts immediately on the lungs through respiration as it does at the bottom of wells, or in long closed cellars or houses, it produces instantaneous death, as is well known; but when it acts on the skin and produces a retrograde action of the lymphatics and lacteal vessels, they pour their contents into the intestines, and hence the great quantities of what is called rice-water discharges from the bowels. I think this cannot be doubted when we consider the very large quantities which are gushing from the bowels, and it will be now recollected that the thoracic duct was found empty, and when we consider the shrinking of the skin and the absence of the serum of the blood; for it will be recollected that in all the examinations, the blood was observed to be deprived of its watery parts and left thick and dark. As the disease advances there is no increased action of the intestines, but a want of action, a lifelessness, they became flaccid and lank. Now we see a flooding from the bowels, not of red blood to be sure, but of white blood, the new blood, and the best of it, for the constant supply through the thoracic duct of the chyle and lymph is now cut off, and the course is changed and thrown into the intestines and so out. If we are correct we can easily understand the reason why there is no bile in the discharges, viz: the liver is not supplied with any new blood out of which to secrete bile; and hence the absurdity of giving calomel



or any thing else to force the liver to act when the liver has nothing upon which to make bile; this surely can be understood by considering the state of the blood, as reported by every medical gentleman who has made post mortem examinations, or examined the body of persons who have died of cholera. Here also is the reason that the bladder is empty, because the kidneys are not supplied with new blood out of which they could secrete urine; all this new blood has been thrown back on the intestines before it has entered the left subclavian vein—all anatomists know that the chyle is taken up by innumerable small vessels, called absorbent vessels; they, in passing along come together until they form one trunk which mounts upwards until it reaches the left subclavian vein, or the left collar bone vein, and then it discharges this fluid which is of a whitish color into the red blood which is conveyed directly to the heart, and from thence it is thrown to every part of the body, as the blood passes slowly through the kidneys they secrete the urine and send it to the bladder through the tubes called the uretus. But here we can understand, if the blood should be deprived of its urine, the kidneys cannot make more, so it is with the liver, the blood being sent to the liver through the vena porta, as we call it, and the liver performs the office of separating the bile from the blood, but if the blood contains no bile the liver cannot furnish any; and we all know it would be useless to goad the liver into action, if we could do it, to cause it to secrete bile when it had nothing out of which to make the bile.

Now let us see if we can account for the different phenomenon in cholera. I think I have shown the reason why there is no bile in the discharges from the bowels. It may be asked how I account for the great thirst in cholera; I answer it is owing to exhaustion; the patient is bleeding to death, and nature calls for something to support her, it is the case with all persons who are dying from a loss of blood; they cry for water and we are told by hunters that when they wound an animal and they are bleeding they run to water. The cramps or spasms which are observed in cholera, are similar to

those observed in bullocks slaughtered by the butchers, it proceeds from a sudden subduction of life, a loss of blood, it is not from the pain, and those muscular spasms continue after the animal is dead and his hide off. So we see the same spasms continue in persons sometimes after death from cholera. The abstraction of the serum of the blood from the skin and the surface of the body, and the blackness or blueness of the body, are produced by the original poison driving these fluids from the surface upon the intestines, and the pressure of the air upon the body and upon the red muscle and vessels containing the red blood; thus we see the sinking and changing of the features and the whole body.

The want of oxygen in cholera patients and the presence of a super-abundance of nitrogen, appears to me to be evident from the color of the blood, from the suddenness of death, from the oppression and difficulty of breathing, from the fact that there are more negroes die of that complaint than white persons, and more men than women; this may be owing to the negro having more of this air about him than the white, the same is believed to be the case in men more than females. Women's manner of dressing allows a more free circulation of air around their bodies than that of men. Again, I have observed that when cold water has been thrown on the body, and then wrapped in blankets; there was an exhalation from the body even of those who had been sometimes without pulse, and who was actually in a collapsed state; this odor had an extremely disagreeable effect on the persons who were in the room, but under those circumstances the patients never failed to recover. Hence it is my belief, that all who would avoid an attack of cholera may do so, at least nine times out of ten, by taking a cold shower bath, or by keeping the body cleansed and well ventilated as it were, once or twice a week, should cholera be in the country where they are.

But we are told that some have died of cholera so suddenly that they had little or no discharge from the bowels; they were struck down as with a blow from a stick; in that case the bad air seems to have acted on

them as it does on those who go down into wells, or into long locked up houses or cellars having foul air in them.

*Treatment.*—I come now to the treatment of cholera, corresponding to the views which I have taken of the pathology of the disease, and my experience of the efficacy of my course of practice. The indications of cure appear to me to be, to stop the hemorrhage or bleeding from the bowels, to restore the circulation of the fluids of the body to their natural course, to relieve the spasms, and to restore the natural heat.

The hemorrhage or bleeding may be stopped by the use of astringents, such as lime-water; kino and opium, where these cannot be had, oak bark tea, briar root tea, or soot tea, or the like. We may restore the circulation of the fluids to their proper course by throwing cold water on the body. The spasms may be returned by laudanum and tincture of castor, as well as by the cold shower bath, or cold effusion; this also will restore the natural heat of the body. When we consider that the body can be warmed sooner by the cold shower bath, than by the warm bath, we do not hesitate which to prefer in cholera, every body knows that when he jumps into cold water and does not stay too long, on his coming out he feels a glow of warmth over his whole body. And where is the physician of any experience, who does not recollect that when he is called to a lady flooding, he orders a towel dipped in cold water or vinegar and water, and sponges the small of the back till the bleeding stops. The great sympathy between the bowels and skin as well as the sympathy between the uterus and the skin and the stomach, and this will teach us the good effect of the application of cold water to the body in cholera. I assert it to be a fact, that when patients have been moaning and sometimes screaming with pains and cramps. I have thrown cold water out of a pail, and that the pains and cramps have ceased in five minutes or less time.

The kino and opium either in the form of a pill or in the form of tincture, acts so as to constrict the mouths

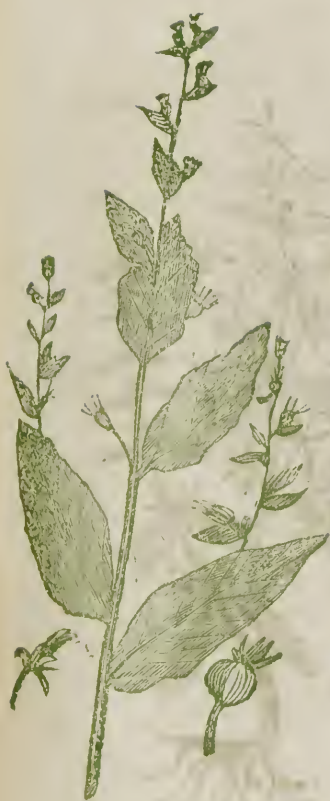


of the vessels which are bleeding, not indeed of red blood, but white blood, so acts the lime-water.

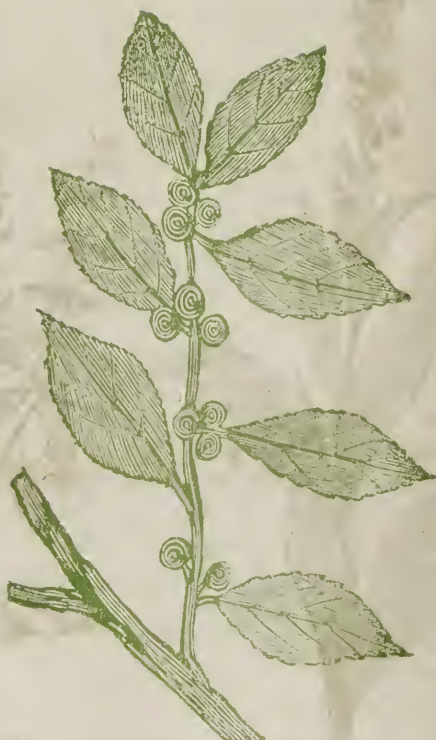
In 1832, in December, in the 3d case of cholera I saw, I formed my opinion of the nature of cholera in a number of cases that I had that month. I put my theory into practice and proved it successful. In 1833, in June and July, I had a number of cases and I again proved my practice to be successful. In the summer of 1834, the cholera raged in Nashville, when I again had a fair opportunity of testing my plan of treatment. In 1833 there were 24 deaths out of about 80 convicts in the Penitentiary, about one mile from Nashville; again in 1834, 24 or 26 died at the same place.

*Recapitulation of my treatment of cholera.*—If the patient is puking and purging of white colored fluid give a pill of one grain of opium and two of kino, every two hours, also two or three table-spoonsful of lime-water, as often as he pukes up what he has taken. Have him stripped of his clothes and throw the coldest water you can get all over his body with a piggin or pail, do this quick, and if there is time, wipe him with the coarsest towel you have and then lay him in blankets and cover him warm; if he has emptied his bowels and stomach, take care that you have some well boiled corn meal gruel made, and let the patient take a little at a time and if he should puke it still, give him more after waiting sometime, if he becomes sick and pukes—again give him the cold shower bath or dash it on, and again wrap him up in blankets—and so on. The same course may be observed in milder cases, although it may not require such heat. There is no use for calomel, or any purgative medicine whatever, for when the circulation shall return to its proper and natural course, and new blood be sent to the liver, it will perform its office. So will the kidneys secrete urine when they shall be supplied with new blood containing water.





Seneca Snake Root.



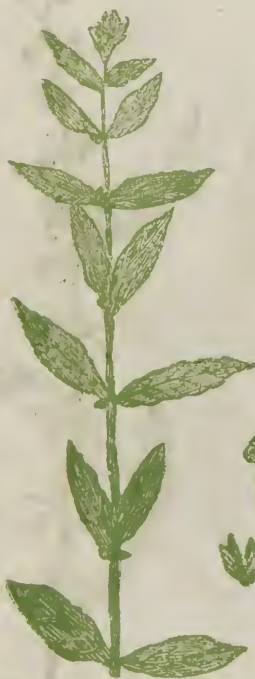
Black Alder.



Lobelia.



Pennyroyal.



Virginia Snake-root.



Water Horehound.



**Yellow Dock.**



**Liverwort.**





Rhubarb.



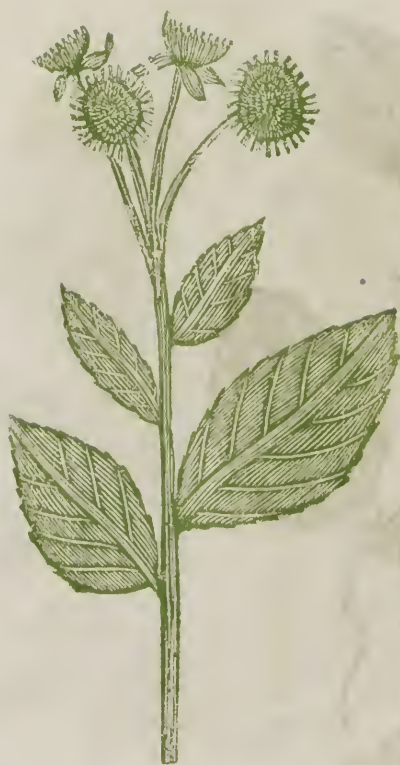
Bitter-sweet.



Spikenard.



Sarsaparilla.



Elacampane.



Pink-root.





Prickly Ash.



Water Fennel.



Blood-root.



Skunk Cabbage.



Garden Nightshade.



Bonei



# MATERIA MEDICA.

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WE have endeavored to give a general description of the important diseases to which the human body is liable, and of the various remedies to be used in their cure. We shall now proceed to describe, as far as practicable, all the valuable roots, plants, &c., that can conveniently be included in a work like the present; and here we are ready to admire, like the Psalmist, and to say, 'How wonderful are thy works, O Lord!' In wisdom hast thou made them all; the earth is full of thy riches." In all parts of these his glorious works, in their admirable fitness to one another, and their constant subserviency to the good of all, we behold the wisdom and goodness of the Great Creator. But in no department of his works do *wisdom* and *goodness* shine with greater lustre than in the vegetable kingdom.

The American continent, though the last discovered, is not the least favored of God in this respect—embracing almost every climate and soil of the globe, it richly abounds with drugs of every healing quality. It is a common saying, that every country contains the best cures for its own diseases; this seems to be verified in our beloved America.

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AGARIC. See *Touchwood*.

AGRIMONY, *Agrimonia*—Grows two or three feet high, in hedges and the margins of fields—blossoms in July on long spikes, yellow. It is known by the vulgar name of *cuckold*, from the seeds sticking to the cloths in the fall of the year.

In whey or tea it forms a good drink in fevers. The juice of this plant, or a strong infusion of the roots, two handsfull to a quart of boiling water, and sweetened with honey, is an excellent medicine in the jaundice, scurvy, and habitual diarrhœa or looseness. Dose of the infusion half a pint; of the juice a wine glassful three times a day. The herb has been applied externally to fresh wounds.

ALDER, BLACK, *Alnus Nigra*—Sometimes called Virginia Winterberry, grows in most places, generally sending up several slender stalks to the height of ten feet, and bears a red berry.

The bark is tonic, and accordingly is used in substance, or

in strong decoction, like the Peruvian bark, in intermittents, and other cases of debility, as dropsy, gangrene, &c. The inner bark in the shape of poultice externally, with the decoction internally, a handful or two boiled slowly in three pints of water to a quart, is celebrated both by Professor Barton and Doctor Mease, as of admirable use in arresting the progress of mortification. A strong decoction of the berries formed into a syrup with molasses in doses of a wine-glassful, or two tea-spoonsful of the powder of the inner bark, is said to be a good purge.

Dr. Thatcher recommends a decoction or infusion of the bark taken internally in doses of a tea-cupful, and employed also as a wash, for the cure of cutaneous eruptions, particularly of the herpetic kind.

ALEXANDER. See *Parsley, Wild.*

ALUM ROOT, *Heuchera Americana*—Called also American Sanicle. The root is a very intense astringent. It is the basis of a powder which has lately acquired some reputation in the cure of cancer. Professor Barton observes that he does not believe that the alum root has cured genuine cancer; but that it has proved very beneficial in obstinate ulcers which have been mistaken for cancers. He says it is one of the articles in the Materia Medica of our Indians, the powdered root of which they apply to wounds, ulcers and cancers.

ANGELICA, *Angelica*—Grows in marshy woods and hedges, flowering in June and July. It is frequently cultivated in our gardens.

Every part of this useful vegetable partakes of its aromatic virtues, but especially the root, which, in the form of powder, tincture or tea, is useful in flatulent colics. Conjoined with dogwood bark, or any other tonic, it may, like the Peruvian bark, be employed with advantage in intermittents and low stages of fever. The dose, one tea-spoonful, in substance of the former, to two of the latter. It may also be employed in the form of strong decoction, in doses of a gill, or in cold phlegmatic habits, in tincture either alone, or with dogwood berries, centaury, lemon peel, or any other article of the bitter and tonic class. A strong decoction of the root, combined with red oak bark, a large handful of each to a pint of boiling water, makes an admirable gargle for relaxed and spongy gums, and ulcerated sore throat.

APPLE, PERU. See *Thorn Apple.*

ARBUTUS. See *Bearberry.*

ARROW ROOT, *Maranta Arundinacea*—Is cultivated in the southern states. A table-spoonful makes a pint of the finest jelly in nature, which affords the most nutritious food in acute diseases for children. To persons laboring under

bowel complaints, as diarrhœa and dysentary, it is of itself a remedy.

The jelly is made in the following manner:—To a table-spoonful of the powdered root, add as much cold water as will make it into a thin paste, and then pour on boiling water through the spout of a kettle, stirring it at the same time briskly, till it becomes a clear jelly; after which, season it with sugar and nutmeg, and, to render it still more palatable, a little wine or lemon-juice may be added. But, to children, blending it with new milk is best.

**ASARABACCA SWAMP**, *Asarum*—Grows in low lands. It has but two leaves, which rise immediately from the root, and divides from one stem. The flowers are purple and bell-shaped, and proceed from between the leaves.

The whole of this plant has a nauseous bitter taste. The root, from a half to a table-spoonful in powder, operates both upwards and downwards. In the form of infusion, a half handful to a quart of boiling water is said to be serviceable in the whooping cough, in doses of a table-spoonful to children every half hour, or oftener, until it vomits; and in doses of a tea-cupful three times a day, it has been used with success to promote the menses, or *courses*.

**AVENS COMMON**, *Geum Urbanum*—Grows a foot high by fences and borders of fields. The blossoms are white or yellowish in July. Its smell resembles that of cloves

A strong tincture of the root, two hands-ful, steeped in a quart of spirits, given to the quantity of a wine-glassful or the powder, in doses of a tea-spoonful, several times a day, has afforded an excellent remedy in intermittents and other disorders where strengthening medicines are requisite. It is said to be equal to the Peruvian bark.

There is another variety of this plant, called water avens, throat root, cure all, which is to be found in boggy meadows. The Blossoms are purplish, and appear in May. Its properties are the same as the preceding. A decoction of it has been found beneficial as a gargle in ulcerated sore throats, which probably gave rise to the name of *throat root* or *throat wort*.

**BACK-ACH BRAKE**. See *Fern Female*.

**BALM**, *Melissa Officinilis*—Makes an excellent tea in fevers, and when sweetened, and acidulated with the juice of lemons or cream of tartar, forms a most grateful beverage.

**BARBERRY**, *Berberis Vulgaris*—Grows along the sides of roads in hedges; leaves oblong, tender, and subject to the rust; the flowers are in clusters; the fruit oblong and acid; the stem is defended by three thorns.

A double handful of the berries, boiled in three quarts of water to two, and given in doses of a tea-cupful four or five

times a day, sweetened with white sugar, is extolled as a remedy in diarrhœa, dysentary, and jundice.

**BASTARD IPECACUANHA.** See *Ipecacuanha American.*

**BAYBERRY,** *Myrica Cerifera Humilis*—Called also Dwarf Candlebury Myrtle, grows in swamps to the height of two or three feet, and bears numerous green berries, of which tallow is made.

The bark of the root has been considered a good remedy for the jaundice. The powder of it, in doses of twenty or thirty grains, has been employed as a mild emetic. The inner bark, in poultice, applied morning and evening to scrofulous swellings, and drinking a tea-cupful of a strong infusion of the leaves, is said to have wrought surprising cures in a few weeks.

**BEARBERRY,** *Arbutus Uva Uris*—Bears wortleberry—wild cranberry. Is a low evergreen shrub, somewhat resembling the myrtle.

The leaves have a bitter astringent taste, and unquestionably possesses great medical virtues, especially in relieving the irritation of the stone, gravel, and old cases of gonorrhœa, menstrual discharges, also catarrhs and consumptions.

The dose—half a pint, twice or thrice a day, of a decoction made of the leaves, a handful to a pint, or a tea-spoonful in substance, two or three times a-day.

**BEECH DROPS.** See *Broomrape Virginia.*

**BENNE,** *Se Samum Orientale*—Is now cultivated in South Carolina and Georgia. The leaves, by infusion, afford an excellent mucilaginous drink, which is used with manifest advantage in dysentary, diarrhœa, and cholera infantum.

The seeds yield a pure and pleasant oil, which in doses from one to two wine-glassfuls, acts well on the bowels. It is now generally used at the tables of the wealthy, and from the specimen I had of it at the table of my honorable friend, Governor Milledge, near Augusta, I consider it equal to the best Florence or sallad oil.

**BETH ROOT,** *Trillium Rhumboidum*—Grows in meadows about a foot high—the leaves oval, three at the top of each stalk, one flower of a purple color, bell-shaped, producing a small berry, that contains the seeds—the root of a brown color externally, bulbous and full of small fibres.

The powder of the root, in doses of one tea-spoonful three or four times a-day, is said to be exceedingly useful in spitting of blood, immoderate discharges of the menses, or in cases of discharging bloody urine. It is also said to be a good application, in the form of poultice, to putrid ulcers, and to obviate gangrene or mortification.

**BIND WEED.** See *Potato Wild.*

**BITTER-SWEET.** See *Nightshade, Woody.*



**BLACKBERRY, or DEWBERRY**—These, though different in name, are nearly, if not entirely, the same in nature. They both bear the same kind of berry, which, when ripe, is pleasant and wholesome.

The roots of these vines, but especially of the dewberry, are famous as astringents. From my own observation in practice, two handfuls of the clear root in three pints of milk or water boiled to a quart, and given in doses of a tea-cupful every two or three hours, has often cured obstinate diarrhœa and dysentery, when the best medicine of the shop had failed.

**BLACK SNAKE ROOT.** See *Virginia Snake Root*.

**BLAZING STAR.** See *Devil's Bit*.

**BLOOD ROOT, *Sanguinaria Canadensis***—Has a variety of names, as Red Root, Puccoon, Indian Paint, Turmeric. It grows about a foot high in rich woodlands, and flowers in April. The leaves are roundish and deeply indented, somewhat like the white oak leaves—stems naked, supporting single flowers; blossoms white. When the fresh root, which is about the size of the little finger, and blood red, is broken, a juice issues in large drops resembling blood.

According to Dr. Downie, the root in powder, from twenty to thirty grains, is strongly emetic. Prof. Barton considers it nearly equal to the Seneka or rattle-snake root in cases of ulcerous sore throat, croup and hives, and other similar affections. Professor Dexter exhibits it in doses of one grain of the powdered root, or ten drops in the tincture, every two or three hours, as an excellent diaphoretic in colds, or pleurisies, rheumatism, and other inflammatory complaints.

A tincture may be prepared by steeping a handful of the root sliced in half a pint of spirits. It may also be exhibited in the form of decoction, a handful to a quart of boiling water, and a table-spoonful for a dose every two or three hours.—The blood root is considered the chief ingredient of the quack medicine known by the name of Rawson's bitters, recommended as a remedy for the jaundice. The juice of the root is said to be good for destroying warts.

To Professor Smith, of Hanover, N. H., the world is indebted for the discovery that this plant, used as a powder and snuffed up the nose, is a certain cure for the *polypus*. Professor Smith also found it of great use in the incipient stages of pulmonary consumption, given in large and repeated doses, and in cases of great irritation it was combined with opium.

Professor Ives, of New Haven, considers the blood root as a remedy in many diseases of the lungs and liver. He observes, that in *typhoid pneumonia*, "in plethoric constitutions, when respiration is very difficult, and the cheeks and hands become livid, the pulse full, soft, vibrating and easily compressed, the

Blood Root has done more to obviate the symptoms and remove the disease," than any remedy which he has used. He infuses from a scruple to half a drachm of the powdered root in half a gill of hot water, and gives one or two tea-spoonsful every half hour, in urgent cases. This treatment has often removed the symptoms in a few hours.

Dr. Ives thinks highly of its use in influenza, in consumption and particularly in whooping-cough. He also states, that, given in large doses, sufficient to produce vomiting, it often removes the croup, if administered in the first stages. "It has been given," he remarks, "for many years, in the country; some physicians relying wholly on this remedy for the cure of the croup."

Dr. Macbride, of Charleston, S. C., has found the Blood Root useful in Hydrothorax; given in doses of sixty drops, thrice a-day, and increased till nausea followed each dose. He also used it with advantage in torpor of the liver attended with colic and yellowness of the skin, a disease common in southern climates.

**BLOODWORTH STRIPED**, *Lapathum Sanguineum Rubrum*—Grows six or seven inches high on the sides of banks and upland woods. Out of the top of the stalk, which is small and bare of leaves, grow small purple flowers, which turn into husks that contain the seed. The leaves, three or four in number, lie flat upon the ground, are hairy, and full of red winding veins; the root small, tough, and fibrous.

An infusion of this plant, a handful to a quart of boiling water, in doses of a tea-cupful every three hours, is said to be useful in restraining immoderate flowing of the menses, and all other hemorrhages. A strong decoction of the roots with half the quantity of sugar or honey, and formed into a syrup in doses of a table-spoonful every hour or two, is beneficial in consumptions or violent coughs. The expressed juice, in doses of a wine-glassful, and the leaves bruised, and frequently applied to the wound from a snake, or any venomous insect, is said to eradicate the poison.

**BLUE CARDINAL FLOWERS.** See *Lobelia*.

**BONE-SET.** See *Thoroughwort*.

**BOWMAN'S ROOT.** See *Indian Physic*.

**BOXWOOD.** See *Dogwood*.

**BROOMRAPE VIRGINIA**, *Orobanchè Virginiana*—Grows from Canada to Georgia, and rises six or eight inches high, of a brown color, bitter sprigs, but no leaves; the root is bulbous. It is generally found under the shade of the American beech tree, hence it is sometimes called beech drops, but more generally cancer root.

Every part of this plant is considerably astringent, and along with the astringency, especially in the recent plant,

there is combined a peculiar and extremely nauseous bitterness. It has been celebrated as a remedy in dysentery, but its principal reputation is in cancerous affections. It is supposed this formed part of the celebrated cancer powder of Dr. Hugh Martin, whose success in the management of many cases of this dreadful disease, has been acknowledged by the regular practitioners of Philadelphia.

It is certain, says Professor Barton, that the powder of cancer root has been of great service, externally applied to obstinate ulcers, some of which had resisted all the ordinary applications. The fresh bruised root has also been applied with good effects to cancerous sores. In the form decoction it has been found useful as a wash to gallings in warm weather, or excoriation of the skin. It is also esteemed a good application in cases of St. Anthony's Fire.

**BUCK THORN, *Spina Cervina***—Grows in hedges. It is a prickly bush; which flowers in June, and produces in the fall a round black berry, containing four seeds.

Equal parts of the expressed juice of the berries and molasses, or half the quantity of sugar, with a little calamus or ginger, formed into a syrup by a gentle fire, is said to be a good purgative medicine in doses of a large wine glassful, and is much used in the case of dropsics.

**BURDOCK, *Arctium Lappa***—Grows on the road-side on rubbish and ditch banks, bearing purplish blossoms in July and August.

The juice of the fresh leaves, on an infusion or decoction of the roots, operates gently on the bowels, sweetens the blood, promotes sweat and urine, and is esteemed serviceable in scorbutic, rheumatic, and venereal disorder. The juice is given in doses of a wine glassful, and the decoction half a pint three times a day.

**BURNT SAXIFRAGE, *Pimpinella***—Grows about a foot high. The leaves are variously shaped, flowers in September; the seeds are furred and egg-shaped.

The root, in the form of decoction, a handful to a quart of water, is esteemed by some a useful medicine in asthma, coughs, and obstructions of the menses, in doses of a wine glassful twice or thrice a-day, sweetened.

**BUTTERFLY WEED.** See *Pleurisy Root*.

**BUTTER NUT.** See *Walnut White*.

**BUTTON SNAKE ROOT.**—"The button snake root grows in South Carolina and Georgia, in poor pine land, the root bulbous, with numerous fibres, of a pungent nitrous taste; the leaves or blades long, narrow, pointed, and saw-edged. A stalk shoots up in autumn, to the height of three feet, bearing globular prickly flowers, of an ash color, which, from a

fancied resemblance to buttons of an old fashion, gives its name.

"This root is a *powerful sudorific*; but, in cases, of gangrene and foul ulcers, is, perhaps, superior to any thing yet discovered. The mode of applying it, is in the form of poultices, by boiling it soft."

**CALICO TREE**, *Kalmia Latifolia*—Broad-leaved laurel; called also winter green; grows seven or eight feet high in swamps and moist rocky postures; blossoms are white, tinged with red in June or July. There is another species, *Kalmia Augustifolia* narrow leaved or dwarf laurel, called also ivy, lambkill; blossoms reddish, variegated.

A decoction of the plant externally applied has often cured the itch; but, like all other poisons, it should be used with great caution. An ointment, made by simmering the leaves in hog's lard, is good for the scald head and obstinate sores. According to Dr. George G. Thomas, an obstinate diarrhœa has been cured, by the decoction made from an ounce of the leaves in half a pint of water, boiled to half, and thirty drops three or four times a-day. In this form it has also been used internally with great success in the scald head.

**CALIMUS, OR SWEET FLAG**, *Acorus Calimus*—Grows in marshy situations, and in shallow water, and may be known by the long sword-shaped leaves, resembling those of the blue and yellow flags, but narrower, and of a bright green. The root is like that of the blue flag in appearance, but has a strong aromatic smell, and a warm pungent taste. The flavor is greatly improved by drying.

The root possesses stomach virtues, and is frequently grated into water and given to children for flatulent colics, free of fever. It is sometimes used as an ingredient with dogwood, cherry bark, centaury, &c., in morning bitters, as a preventive of the ague in low marshy situations.

**CAMOMILE**, *Chamæmelum*—Grows well in our gardens. An infusion, or tea, made of the flowers, is excellent to warm and strengthen the stomach in cases of indigestion, loss of appetite, and other complaints arising from debility. It is also of great use in doses of a tea-cupful three times a day, as a preventive to the ague and fever, and bilious in sickly situations. In the form of fomentation and poultice, it is serviceable in discussing hard tumors.

**CAMOMILE, WILD.** See *Mayweed*.

**CANCER ROOT.** See *Broomrape Virginia*.

**CANDLE-BERRY MYRTLE.** See *Bayberry*.

**CARAWAY**, *Carum Carui*—A choice aromatic; grows kindly in our gardens. The seeds assist digestion, strengthen the stomach, and are serviceable in flatulent colics. The



dose of the seeds in powder, from one to two tea-spoonful to adults.

**CARROT, WILD, *Daucus Carato*.**—The wild carrot grows two or three feet high in meadows and swamps, and flowers in July. The seeds have an agreeable aromatic smell, and, in a slight degree, a warm pungent taste.

An ounce or half a handful of the seeds infused in a pint of water, and taken in doses of a tea-cupful every hour or two, is said to give immediate relief in suppression of urine, and is also serviceable in promoting the menses.

The roots of the carrot cultivated in our gardens, beaten to a pulp, form an excellent application to cancerous and other ill conditioned ulcers, allaying the pain, checking the suppuration and fœtid smell, and softening the callous edges. A marmalade of carrots, on account of their strong and antiseptic qualities, has been successfully used for preventing and curing the sea scurvy. An infusion of these roots has also been found useful in gravel complaints.

**CASTOR OIL, *Ricinus Communis*.**—Flourishes well among us. The kernels yield almost a fourth part of their weight in oil, which is obtained from them either by expression or decoction. Expression is the best method of preparing; but the common mode is to shell the seeds and boil them in water, and as the oil rises, to skim it off.

Castor oil is a gentle and useful purgative, and is a most efficacious remedy for the colic or dry belly-ache, and also dysenteries, in doses of a wine-glassful every two or three hours until it operates. In doses of a tea-spoonful, it is the most suitable purge, when not rancid, to expel the meconium from new-born infants.

**CAT-GUT, OR GOAT'S RUE, *Galega Virginiana*.**—It is vulgarly called cat-gut, from the resemblance of some of its roots to the article of that name.

A decoction of the roots is reputed to be an excellent medicine for destroying worms.

**CELANDINE, THE GREATER, *Chelidonium Major*.**—Grows about two feet high, in meadows and by running brooks, has many stalks, with larger joints than is common in other plants, very easily broken; the leaves large and saw-edged; the flowers, consisting of four leaves, are yellow; after which come long pods enclosing black seeds; the roots long, reddish externally and yellow within, and full of yellow juice.

Twenty or thirty drops of the juice, or half a tea-spoonful of the dried root in powder, in a cup of new milk, morning and night, is said to be beneficial in dropsy, green sickness, and cutaneous eruptions. The juice rubbed on warts, ring and tetter worms, effectually cures them. A poultice made

of this plant boiled in milk, or the roots roasted, and mashed in vinegar, is extolled by some as an excellent application to disperse serofulous tumors on the neck.

**CENTAURY**, *Centaurium Minor*—Is a fine stomach bitter, and either in a simple infusion, or united with calimus or angelica root is excellent in relaxations of the stomach and general debility.

**CHERRY TREE, WILD**, *Prunus Cerasus Virginiana*.—The bark of this tree is an excellent substitute for the Peruvian bark. I have myself frequently employed it in the cure of ague and fever, bilious fever, and other diseases where tonic medicines were proper. In intermittents of long standing, I have found it more efficacious when united with the Virginia snake root, in the proportion of one part of the latter to four of the former. It may be employed, either in powder or decoction, in the same doses as the Peruvian bark. A strong infusion of it in sound cider, is said to be useful in the jaundice. A decoction of the bark will be found a good wash to ill-conditioned ulcers. The cherry of the tree, when ripe in autumn, is much used in the southern States for making bounce and cordial. The gum of the common cherry tree is a good substitute for the gum Arabic.

**CHICK-WEED, RED**, *Annagallis Phenicea*—Called also red pimpernel, gauch-hul. Is cultivated in many gardens, and grows spontaneously near Baltimore and Havre de Grace.

According to the deposition of Valentine Kettiring to the Legislature of Pennsylvania, and report made by their committee, the red chick-weed is a specific in that most dreadful of all diseases, the hydrophobia, or bite of a mad dog. The dose for an adult is a small table-spoonful of the dried leaves in powder. For beasts, the dose is much larger.

**CINQUEFOIL**, *Potentilla Reptans*—Grows on pasture grounds, and is something similar to strawberry. The stalks trail along the ground, and have but five leaves on each stalk, placed together, of an equalsize, and bear a yellow flower.

The whole of the plant, particularly the root, in the form of decoction, a handful to a quart of water, or milk, boiled slowly, and sweetened with loaf sugar, is recommended as a remedy for the dysentery and bowel complaints. The dose for adults is a tea-cupful three or four times a day, and one-third or half the quantity for children.

**CLEAVERS**. See *Goose Grass*.

**COCUM**. See *Pokeweed*.

**COCK-UP-HAT, OR YAU WEED**, *Stillingia*—Grows on the high dry lands of the southern States, and is much used there as a cathartic medicine. It is employed in the cure of that hideous disease, the yaws, and is said to be a specific in the venereal disease.

**COHUSH, OR PAPOOSE ROOT,** *Caulophyllum Thalic-troides*—Grows about two feet high, in low, moist, rich grounds, near running streams, and on islands that have been overflowed. The leaves grow on small stalks near the top of the stem, which resembles the hand and fingers. The flowers are of a pale blue color, which yield a berry something like grapes. The root is composed of many fibres, and is crooked, resembling the rattle snake root.

An infusion of the root, a handful to a quart of boiling water, in doses of a tea-cupful three or four times a day, or the same quantity steeped in a quart of spirits, in doses of a wine-glassful twice or thrice a day, is highly extolled by the country people as a remedy for the rheumatism, and serviceable in cases of obstruction of the menses and dropsical complaints.

**COLT'S FOOT,** *Tussilago Farfara*—Grows about eight inches high, in moist situations, producing yellow flowers, early in the spring, which appear before the leaves. These are soon succeeded by large roundish leaves, which have a bitterish mucilaginous taste.

It is said a decoction of the leaves and flowers, two handful to a quart of water, with or without milk, taken freely, is serviceable in cough, consumptions, diarrhœa, and dropsical complaints. The leaves, finely powdered, and used as a snuff, remove giddiness and obstructions of the head.

**COLUMBO AMERICAN,** *Columbo Americana*—Grows plentifully in the western country, in the vicinity of the Ohio river; and, from abundant experiments, is found fully equal to the imported. It has been long esteemed a powerful antiseptic and tonic; and as such, has been employed with manifest advantage in gangrene, cholera morbus, bilious vomiting, bilious fever, indigestion, want of appetite, &c. It may be given in powder, in doses of a small tea-spoonful every three or four hours, or in decoction, in doses of a tea-cupful. Two or three ounces of the root, steeped in a quart of spirits, form an excellent bitter, which, when taken in mint water, or infusion of the orange peel, in doses of a table-spoonful, is excellent for moderating the retching in pregnant women.

**COMFREY,** *Consolida*—Grows about two feet high in moist situations near springs, but is cultivated in our gardens. The leaves are large, similar to water dock, flowers of a pale blue color; the roots long, rather thicker than a man's finger, mucilaginous, and black eternally, but white within.

A handful of the roots boiled in milk, and given in doses of a tea-cupful three or four times a-day, is a popular remedy in dysentery, bowel complaints, and the fluor albus, or whites, It is also beneficial as a diet drink in the clap, or in other cases attended with a burning heat in making water.

**CORIANDER**, *Coriandrum*—Is cultivated in our gardens. The seeds are warm, and of a pleasant flavor, and in doses of a tea to a tea-spoonful, have been found useful in cases of indigestion and flatulence. When mixed with senna, they more effectually correct the odor and taste of the infusion, than any other aromatic. They also form an excellent addition to ingredients for bitters.

**COW PARSNIP**, *Heracleum Spondylium*—Is found in hedges, meadows, and pastures; but should be carefully distinguished from the hemlock or wild parsnip that grows in hedges, and is poisonous.

According to Dr. Orne, of Salem, it has been often used with success in epilepsy, especially in cases of indigestion with flatulence. The dose is three drachms of the powdered root, taken daily, and a strong infusion of the leaves and tops drank at bed-time.

**CRANE'S BILL**, *Geranium Maculatum*—Improperly called by some Crow Foot. It grows five or six inches high in meadows and woods: has long slender stalks, with seven long narrow leaves at a joint. The root is generally crooked and knotted, blackish on the outside, and reddish, has a rough taste, with an aromatic flavor.

When applied externally, it is highly extolled for its typtic power, in stopping hemorrhages of wounded vessels. The powdered root, in doses of a tea-spoonful three or four times a day, or a decoction, in milk, used as a common drink, is said to be excellent in checking immoderate menstrual discharges, also the whites and gleet, and obstinate diarrhœa.

The following account of the efficacy of Crane's Bill, as stated by Dr. Mcase, in the Medical Museum, deserves the attention of the reader.

The son of Mr. David Cooper, near Woodbury, partially divided the artery at the wrist with the point of a hatchet in trimming a tree; the wound bled profusely, and an aneurismatic tumor, of the size of a pullet's egg, was quickly formed. Dr. Hendry, who was immediately called, applied a tourniquet, and also a piece of flat lead to the tumor; and apprehending that the usual operation would be necessary, requested the assistance of Dr. William Shippen from Philadelphia. On the arrival of that gentleman, the operation was resolved on; when the father of the young man insisted upon the trial of a vegetable remedy, which he said he had learned the use of from one of the aborigines of the country. He immediately repaired to the woods, and returned with some of the specific, which was pounded in a mortar with a little cold water, and applied to the part, and in a short time, to the great satisfaction of the sufferer and his friends, checked the bleeding. The tourniquet was left on as a precautionary measure,



but fortunately no occasion offered for using it. In the course of a few days the wound healed, and the young man had no further trouble.

A man in pruning a tree, divided the stout muscles of the forearm in an oblique direction; the wound was full four inches in length, and bled profusely from a large artery, and numerous smaller vessels. His shirt sleeve was full of blood; for, being made tight round his wrist and forearm, it prevented the blood escaping, and forming a coagulum round the bleeding orifice, checked for a short time farther effusion.

The powerful effects produced by the geranium in the former case, induced Dr. Hendry to apply it in the present; accordingly, he procured some of the roots, and after washing and pounding them, filled the wound therewith: the effect upon the smaller vessels was almost instantaneous in checking the profusion of their contents, and the bleeding in a short time entirely ceased; and although, as in the former case, the tourniquet was very properly suffered to remain, yet no occasion offered for using it.

Another case occurred of a wound in the ankle from a scythe, which had bled so profusely as to cause the man to faint; but on the application of the geranium by Dr. Hendry, as above, it ceased in a short time.

In the instance of a violent vomiting of blood, which had resisted a variety of remedies, an infusion of the plant in water, produced the desired effect in a few minutes.

Another instance mentioned to me by Dr. H., of the astringent effect of the geranium, was that of a young man who had a most obstinate hemorrhage from the socket of a jaw-tooth, which had been extracted. An attempt was made by a physician from Philadelphia, to close the bleeding orifice by burning it with a red hot needle, but without effect; on the application, however, of the geranium, the bleeding soon ceased. In consequence of the virtues of the geranium having been so often experienced about Woodbury in cases of hemorrhage, the inhabitants have been induced to cultivate the plant in their gardens; and it would be well if their example were followed by every one in the country; for though Providence has diffused the valuable plant over every part of our country, yet as it grows principally in the woods, and the accident it is intended to relieve may admit of no delay, and often happens in winter, when the plant cannot be found, it should be transferred to every garden, that it may be at hand when wanted.

**CROSSWORT.** See *Thoroughwort*.

**CROW FOOT,** *Ranunculus Bulbosus*—A very acrid plant, growing in meadows and fields. The leaves or roots bruised

and applied to any part of the body, will soon raise a blister, and ought to be used when the Spanish flies cannot be obtained. The roots, collected in the fall, may be very well preserved through the winter by burying them in some fine dry sand.

CUCKOW. See *Agrimony*.

CUCKOW BREAD. See *the following*.

CUCKOW PINT, *Arum Maculatum*—Also called lords and ladies, wake robin, dragon root. The leaves are generally be-spangled with black and white spots, striped in gaudy style; whence the country people have given it the name of lords and ladies. The root is bulbous, resembling a small turnip.

Both this and the leaves, in a fresh state, are extremely acrid, and have been used with advantage externally for blistering, and internally in cachexies, rheumatism, and all other complaints of cold phlegmatic habits. Of the fresh root, from ten to thirty grains may be taken thrice a-day, in the form of emulsion, with gum Arabic, or cherry-tree gum. The root, which should be used fresh, may be kept so for a year, by burying it in a cellar in sand.

CUCUMBER ROOT, *Medeola Virginica*—According to Professor Barton, is a very common plant. The root is white, and tastes a good deal like the cucumber. It possesses diuretic properties, and has cured dropsies.

CURE-ALL. See *Avens*.

CURRANTS, *Ribes*—The white, red and black currants, all grow luxuriantly in our gardens; and when perfectly ripe, and made with sugar and water into the form of lemonade, serve as a most grateful and cooling drink in fevers.

An infusion of the bark, sweetened with currant jelly, or honey, is an excellent gargle in sore throat, and an infusion of the young shoots is said to be beneficial in eruptive fevers. Currants afford an excellent wine; for making which, the following is an admirable recipe:—

Of red or white currants, ripe, take fourteen pounds, broken into three gallons of water, and let it stand for two days, when the stalks, &c., will be at the top. Press off all the stalks, and, while straining the mixture, add twelve pounds of sugar; turn it into a cask, and keep it full enough to let the feculent matter work out—repeatedly removing it, and filling it up, until no more rise, which will be in about fourteen days: add to it one quart of spirit nearly tasteless, or else brandy, and bung up close, keeping it at least six months before it is bottled. Let the currants be gathered free from dew or rain; and if they be spread a day or two before they are used, they will be none the worse.—Fourteen pounds will make one gallon of juice, twelve pounds of sugar another gallon; there-

fore, the above ingredients should be equal to five gallons; and enough to fill up with.

CUSTARD APPLE, *Annona Triloba*—Is said to be a good purgative medicine.

DANDELON, *Leontodon Taraxacum*—Vulgarly called piss-a-beds, grows in meadows, pastures, and road-sides, and ditch-banks, with yellow flowers, which blow from April to September, and possess the remarkable quality of expanding early in the morning, and closing in the evening.

The root, leaves, and stalk, contain a large proportion of bitter milk juice, which, in doses of a wine-glassful twice or thrice a-day, is good in chronic inflammations of the liver, dropsies, difficulty of making water, and other complaints arising from obstructions of the viscera. It may also be taken in the form of a strong decoction, from a gill to a half pint, twice or thrice a-day.

DEADLY NIGHTSHADE. See *Nightshade*, *deadly*.

DEERBERRY. See *Mountain Tea*.

DEVIL'S BIT, *Veratrum Luteum*—The root of this plant is a very pungent bitter, and is employed as a tonic, either in the form of tincture or infusion. In this last form it has been employed as a vermifuge.

DEWBERTY. See *Blackberry*.

DILL, *Anethum Gravolens*—Flourishes in our gardens, producing seed delightfully aromatic, which, in doses of one or two tea-spoonfuls, is excellent to remove flatulent colics, and assist digestion.

DOCK WATER, OR WATER DOCK, *Rumex Aquaticus*—Grows in wet ditches, mill-ponds, sides of rivers, and in shallow water, flowering in July and August.

Half a pint of a decoction of the leaves or roots, two handful to a quart of boiling water, or two or three tea-spoonful of the dried roots in powder, taken two or three times a-day, is an admirable medicine to sweeten and purify the blood in scurvy, scald head, tetter-worm, and other cutaneous diseases. The fresh roots bruised, and mixed with vinegar, or in strong decoction, are a good cure of the ring-worm, and have often subdued that filthy complaint, the itch, when quack medicines, and even sulphur, had failed. They are also worth trying in the form of a poultice to tumors and cancerous ulcers.

The *curled dock*, *narrow and broad-leaved dock*, which grow in yards and cultivated fields, are all varieties of this useful plant, and possess similar virtues. It is said the narrow-leaved dock, applied in the form of fomentation and poultice, to a cancerous sore, and from a pint to a quart of the decoction, taken daily, makes a perfect cure.

DOGWOOD, *Cornus Florida*.—The bark of this famous tree, which may well be termed the chicon or Peruvian bark

of North America, possesses, like that, all those tonic powers, which give it such admirable control over intermittents, gangrene, and all diseases proceeding from debility.

From my own observation in practice, I am abundantly warranted in pronouncing it generally preferable to the imported bark, which is often injured by adulteration. Like the Peruvian bark, but in somewhat larger doses, it may be used in substance or decoction, infusion, or tincture, either alone or conjoined with snake root, or some of the aromatics. But the shape in which it will be found most agreeable, is that of an extract; which is easily prepared by boiling the bark, straining it, and then evaporating it very slowly to the consistence of honey. To prevent the fatal effects of burning it, the vessel in which it is evaporated should be of the wide mouth sort, placed in a large pot of boiling water, and often stirred towards the close of the operation.

The dose is from a half to a whole tea-spoonful, three or four times a day. The beautiful red berries of dogwood, combined with lemon-peel, snake-root, ealimus, or any other warm aromatic seeds, form a fine bitter against the common fall complaints.

DRAGON'S CLAW. See *Fever Root*.

DRAGON ROOT. See *Cuckow Pint*.

ELDER COMMON, or BLACK, *Sambucus Niger*—Grows to the height of a small tree, in hedges, and along the border of meadows; the young shoots are full of pith, and the old stalks empty; flowers in July, and the berry of a blackish purple color when ripe.

The expressed juice of elder berries put into a plate, or wide mouth vessel, and evaporated in the sun to the state of an extract, in doses from a tea to a table-spoonful, acts as a good aperient medicine. A tea made of the leaves, a large handful to a quart of boiling water, and taken freely, removes a costive habit, promotes perspiration, and thus proves useful in eruptions of the skin, St. Anthony's fire, colds, dropsies, and all obstructions of the viscera. The inner green bark, steeped in wine, a large handful to a pint, or made into a strong decoction, purges gently, in doses of a gill. The flowers stewed with lard, form a good ointment for burns.

Elder berries also make an excellent wine, according to the following recipe: Elder wine is made by mixing twelve gallons and a half of ripe elder berry juice, and forty-two pounds of sugar, with thirty-seven gallons and a half of water, that previously had boiling in it six ounces of ginger, and nine ounces of pimento, bruised and strained off; and when it has nearly cooled, rather less than milk warm, add a pint of thin brewer's yeast, and let it foment for fourteen



days in the barrel, then bung up close, and bottle in six months.

**ELECAMPANE, *Inula Helineum***—Grows three or four feet high, in stony pastures, and by the road-side; flowers large and yellow, in July and August; and the root, when dry, has an agreeable aromatic smell, and in a decoction sweetened with honey, or in the form of syrup, or a tea-spoonful of the powdered root in molasses, is recommended for promoting expectoration in asthma and coughs. The fresh root in ointment or strong decoction, is said to cure the itch.

**ELM, AMERICAN, OR SLIPPERY, *Ulmus Americana***—My very learned friend, Professor Mitchell, has witnessed its good effects internally in catarrhs, pleurisies, and quinsies, and externally as a poultice in gun-shot wounds, tumors, and all ulcers and sores accompanied with irritation. A tea-spoonful of the inner bark in powder, to a quart of boiling water, or a simple infusion of the bark in boiling water, forms an astonishingly rich jelly, which I have often tried with the happiest effects in diarrhœa and dysentery. With the addition of a little sugar, lemon juice, citron, or nutmeg, it might be made an excellent substitute for sago, or arrow root.

I am indebted for this improvement to the Reverend and very amiable Dr. Grant, many years chaplain to Congress, and physician to Mr. Jefferson. This learned gentleman, universally celebrated for his successful treatment of dysentery, declared to me, with great candor, that he ascribed much of his reputation in that dangerous disease to this fine jelly.

**EMETIC WEED, OR INDIAN TOBACCO, *Lobelia Inflata***—Grows in dry fields, and rises to the height of one or two feet, with branch stems, flowering in July and August, with blown cups, filled with numerous small seeds. The blossoms are solitary, in a kind of spike, of a pale blue color. The leaves are oblong, and have a very acrid and pungent taste, similar to that of tobacco.

The leaves collected in August, while the plant is in blossom, and carefully dried and preserved, act as a speedy and excellent emetic, in doses from ten to twenty grains; or it may be exhibited in the form of a saturated tincture, in doses from a tea to a table-spoonful.

As it is a medicine of considerable activity, it should be given in small quantities, and the dose repeated every ten or fifteen minutes, until it excites vomiting. From its speedy operation as an emetic, there is no doubt it would be an effectual remedy for the croup and whooping-cough. In small doses, it must be of great utility in consumptive and other

coughs, by exciting expectoration. It is, however, valued on account of its approaching nearer to a specific in that most distressing disease, the asthma, than any other that has been yet discovered.

The following highly interesting observations from the Rev. Dr. M. Cutler, an eminent botanist, who first noticed the virtues of this plant, is related in Dr. Thatcher's American New Dispensatory.

"By chewing a small portion of it, commonly not more than *one* of the capsules, it proves a gentle emetic. If the quantity be a little increased, it operates as an emetic, and then as cathartic, its effects being much the same as those of the common emetics and cathartics.

"It has been my misfortune to be an asthmatic for about ten years. I have made trial of a great variety of the usual remedies, with very little benefit. In several paroxysms, I had found relief more frequently than from any thing else, from the skunk cabbage. The last summer I had the severest attack I ever experienced. It commenced early in August, and continued about eight weeks. Dr. Drury, of Marblehead, also an asthmatic, had made use of the tincture of the Indian tobacco, by the advice of a friend, in a severe paroxysm early in the spring. It gave him immediate relief, and he has been entirely free from the complaint from that time. I had the tincture made of the fresh plant, and took care to have the spirit fully saturated, which, I think, is important. In a paroxysm, which was, perhaps, as severe as I ever experienced, the difficulty of breathing was extreme, and after it had continued a considerable time, I took a table-spoonful. In three or four minutes my breathing was as free as it ever was, but I felt no nausea at the stomach. In ten minutes I took another spoonful, which occasioned sickness. After ten minutes, I took a third, which produced sensible effects upon the coats of the stomach, with moderate puking, and a kind of prickly sensation through the whole system, even to the extremities of the fingers and toes. The urinary passage was perceptibly affected with a smarting sensation in passing urine, which was probably provoked by stimulus on the bladder. But all these sensations very soon subsided, and a vigor seemed to be restored to the constitution, which I had not experienced for years. I have not since had a paroxysm, and only a few times some small symptoms of asthma. Besides the violent attacks, I had scarcely passed a night without more or less of it, and often so as not to be able to lie in bed. Since that time, I have enjoyed as good health as perhaps before the first attack. Dr. Cutler states a particular case has been related to him, of an effectual cure of the hydrophobia,

or bite of a mad dog in the last stage of the disease, by this plant. In a disease so formidable as this, it is certainly worthy of trial."

Dr. Bradstreet, of Newburyport, has given the saturated tincture in cases of dyspepsia, also in some cases of a rheumatic nature, with beneficial consequences.

He considers its sensible effects to be very like those of common tobacco, but its medical action more speedy and diffusible, and of shorter duration. He thinks that it affects those accustomed to the use of tobacco as readily as others. The active properties of the *Lobelia* are readily extracted both by water and alcohol. The tincture, however, is most easily kept, and is the most convenient form for exhibition. The tincture is prepared by digesting two ounces of the dried plant in a pint of diluted alcohol. A tea-spoonful given to an adult, will generally produce nausea and sometimes vomiting. In certain instances however, much larger doses have been given, without producing any other effect than a flow of saliva.

**ERGOT, OR SPURRED RYE, *Secale Cornutum***—Rye is subject to a disease, in low wet situations, or when a hot summer succeeds a rainy spring. The spurious substance called *ergot*, is found projecting from among the leaves of the spike or ear; it is a long crooked excrescence resembling the spur of a cock, pointed at the extremity, of a dark brown color externally, and white within. Some spikes are wholly occupied by spurs, while others have two or three only, interspersed with genuine seeds of rye.

This extraordinary substance possesses considerable medicinal properties. In lingering and laborious cases in child-bed, it acts as an invaluable medicine, speedily inducing forcible pains, and expediting delivery. It is given in the form of powder in doses of from five to fifteen grains; but it has sometimes been found more active in the form of decoction, prepared by gently boiling thirty grains of the powder in half a pint of water, of which one-third may be taken every twenty minutes, until proper pains shall have commenced.

It is proper, however, to caution the domestic practitioner against employing this powerful medicine in cases of preternatural presentation, or even in every case of natural presentation. The powerful and continued efforts of the uterus, from the effects of the ergot, prevent the retreat of the child's head after being advanced, and the unceasing pressure, in some instances occasioned the death of the child. Let this circumstance, therefore, have its due effect, and induce the utmost precaution in the administration of this powerful article.

This medicine has also been successfully employed in cases



of obstructed menses, or monthly evacuations.—See *Thatcher's Dispensatory*.

EVERGREEN CASSINE. See *South Sea Tea*.

FEATHERFEW, OR FEVERFEW, *Matricaria Vulgaris*.—It is frequently cultivated in gardens. A handful of the leaves and tops infused in a quart of water and given in doses of a tea-cupful three or four times a day, is used by country people to promote the menses, to strengthen the stomach, to raise the spirits, and promote perspiration in colds and fevers.

FENNEL, SWEET, *Fœniculum Dulce*.—Grows kindly in our gardens. A tea-spoonful of the seeds, with a little sugar and spirits, is a common remedy among the country people in flatulent colic. To children afflicted with the above complaint, an infusion of the seeds, sweetened, is highly serviceable. The seeds yield an aromatic oil, which, in doses from two to twelve drops, removes flatulence, promotes expectoration, and is serviceable in coughs.

FERN FEMALE, OR BACK ACHE BRAKE—Grows near ponds, and in moist pastures, about twelve inches high. The leaves are single, winged, about a hand's length; the root is about the size of goose-quill, of a brown color, very sweet, and of a mucilaginous taste.

A quart of a strong decoction of the roots, and a pint of honey, formed into a syrup, by gentle simmering, and given in doses of a table-spoonful every hour or two, is esteemed highly beneficial, in all violent coughs. It is said that three parts of the roots of this plant, and one part of stomach root, boiled slowly in any kind of spirits, until it becomes slimy, and then applied warm to the spine, has frequently relieved the back ache; hence the vulgar name back ache brake. It has also been employed as a remedy for the rickets in children.

FERN MALE, *Polypodium*.—Called also sweet fern, male polypody. It grows in woods and stony places; flowering from June to October.

The root, when chewed, is somewhat mucilaginous and sweet, and afterwards astringent and bitter.

Sweet fern in powder, in doses from one to two tea-spoonful, or a decoction, a pint a day, followed on the fifth day with a dose of castor oil, or some purgative medicine, is esteemed a powerful medicine against worms, and particularly the tape worm.

FEVER BUSH, OR WILD ALSPICE, *Demus Febris*.—Grows in meadows and swamps, and generally rises five or six feet high, leaves numerous and somewhat spear-shaped; the blossoms rather of a reddish color; the berries are blood red, and of a pleasant smell.



A handful of the twigs of this bush, infused in a quart of boiling water, and given in doses of a tea-cupful every hour or two, is said to be extremely cooling and beneficial in fevers.

A handful or two of the berries infused in a quart of spirits, forms a pleasant bitter.

**FEVER ROOT, OR DRAGON'S CLAW**—Grows upon mountains and the sides of hills; about six or seven inches high; the leaves grow in a cluster from the top of the root; spear-shaped; blossoms yellow; the root black, about the size of cloves, very tender, resembling the claws of the animal whose name it bears. When it is pulverized and exposed to the air, it will liquify.

The root, in the form of powder, in doses of a tea-spoonful, or in the form of decoction, a handful to a quart of water, in doses of a tea-cupful every hour, is esteemed an excellent medicine in bilious fever, pleurisy, colds, St. Anthony's Fire and other febrile diseases.

**FIG TREE, *Ficus***.—This tree ought more generally to be cultivated in our gardens, as it affords a fruit both grateful to the stomach, and easy of digestion, possessing also medicinal properties. A decoction of figs makes an excellent gargle for cleansing the throat and mouth; and the fruit, externally applied to tumors, or gum-biles, is good to promote supuration. When unripe figs, as well as the whole tree, yield an acrid milky juice, which, if taken, proves both emetic and purgative, but externally is a mild caustic: hence it is frequently used to remove warts, ring and tetter worms.

**FLAG, BLUE OR WATER FLAG, *Iris Pseudacorus***—Grows by the brink of rivers, in swamps and meadows, blossoming in July; flowers blue, variegated with white, yellow, and purple.

The juice, in doses of a tea-spoonful, diluted with water, is said to be an active cathartic medicine, and to produce copious evacuations from the bowels, and to be useful in dropsy and dysentery. It produces similar effects in powder, from thirty to sixty grains, and has been employed as a vermifuge. In the form of decoction, used as a diet drink, it is greatly extolled in venereal cases.

The root of the yellow flag, mixed with the food of hogs that have been bitten by a mad dog, has been known to save, when without it others have run mad.

**FLAG, SWEET.** See *Calimus*.

**FLAX-SEED, *Linum***—Possesses great medicinal virtues. An infusion, or tea, is the most suitable drink for patients laboring under violent colds, coughs, difficulty or burning in making water. The flax-seed syrup, which is prepared by adding a pint of honey to a quart of strong tea, and simmering it away slowly by a gentle fire for an hour, observing to

take off the seum as it rises, I have found to be a most valuable medicine in diseases of the breast and lungs, in doses from a tea to a table-spoonful every hour or two, or oftener, when the cough is troublesome. The flax-seed bruised, also forms one of the best emollient poultices with which we are acquainted.

**FLEA-BANE, PHILADELPHIA, *Erigeron Philadelphicum***—Called, by some, skerish. It is said, by Professor Barton, to be a very common plant in many parts of the United States, and that in the form of infusion or decoction, it operates powerfully as a diuretic, and also as a sudorific. It is likewise reputed to be a good remedy for promoting the menstrual discharge.

In Virginia, there is a plant called Pisswort, which is esteemed a powerful medicine in cases of strangury, or difficulty of urine.

**FLOWER DE LUCE.** See *Flag, Blue*.

**FLUX ROOT.** See *Pleurisy Root*.

**FOXGLOVE, *Digitalis Purpurea***—Has lately been cultivated in our gardens. It rises to the height of two or more feet, and its leaves are large, egg-shaped, notched like a saw, and covered with hairs. Blossoms of a beautiful purple color, hanging downwards in a row along one side, which are compared to the fingers of a glove, and in the inside are elegantly mottled with spots like little eyes.

The foxglove has been employed with advantage in those disorders where the frequency of the pulse requires to be abated. In the incipient stage of consumption, it has, by diminishing the circulation through the lungs, frequently succeeded in arresting the progress of the disease. It has also been advantageously employed in the second stage, but here it should be exhibited with the greatest precaution. The treatment of consumption with foxglove, cannot be more satisfactorily shown, than in the following practical remarks of my learned friend, Dr. John Spenceer, of Dumfries, Virginia, communicated in that useful work, the New York Medical Repository:

“In the incipient stage of consumption, where there is considerable vigor of constitution, particularly if attended with active hemorrhage from the lungs, I push the use of the digitalis cautiously, but freely; that is, I try to reduce the pulse under sixty strokes in a minute, and maintain this depression for two or three weeks, notwithstanding there be occasionally considerable and distressing nausea. At the same time, I advise a milk and vegetable diet, with gentle exercise on horseback, or in a carriage, when the weather will admit, and the use of the swingchair for an hour at a time, twice or thrice a day. When the pains about the chest are wan-

dering, I also advise the repeated application of a blister, and other stimulating plasters, to the breast and between the shoulders; but if the pain be fixed, I prefer the introduction of a seton as near the part affected as possible. My patient is also directed to drink moderately of emollient teas, or tar-water, to be warmly clothed, to avoid cold and wet feet, and sitting up late at night. All great exertions of the body, but particularly of the lungs, as singing, or speaking loudly, must also be carefully avoided.

“In the second or more advanced stage of this disease, accompanied with a quick pulse and great general debility, the treatment is very different. The foxglove must be so managed, as to lower the pulse, and moderate the fever, but never pushed to such an extent, as to excite nausea or sickness at the stomach. A little experience will soon enable a judicious and attentive practitioner to ascertain the dose adapted to his patient’s constitution; and as soon as he has attained this knowledge, he must be persevering in the use of the medicine. At this period of the disease, the patient’s strength must never be suffered to languish. He must be supported by nutritious diet. Agreeably to the present manners of society, two or three meals are taken in the course of the day; but this mode of eating is very improper with delicate constitutions, more food being generally eaten at such stated periods, than is necessary; thereby causing great heat, accelerating the pulse, and throwing the whole system into commotion. The diet should be nourishing, and of easy digestion, such as jellies, broths, eggs boiled soft, oysters, raw or moderately roasted; indeed, a bit of fowl, beef, mutton, or venison, dressed rare, may be taken in small quantities every two or three hours throughout the day. This deviation from the present fashion of eating is indispensable, ample nourishment being thereby thrown into the system without exciting irritation. At the same time I recommend solid food in this way, I forbid the use of spices, wine, or spirits. The same directions respecting topical applications and exercise, are equally applicable to this as the incipient stage, and particularly the exercise of swinging; and care must be taken that the swing-chair be so constructed, that the patient may be perfectly at ease without being afflicted with fatigue or bodily exertion.”

Many other respectable physicians bear testimony in favor of this medicine in consumptive cases. Dr. Beddoes, of London, considers the foxglove almost infallible as a remedy in consumption, as the Peruvian bark in intermittents. From its power of reducing the force of the circulation, it is esteemed likewise a valuable remedy in bleeding of the nose, spitting of blood, and excessive discharge of the menses, and

also palpitation in the heart, from the passions of the mind, or intemperance.

Dr. Rand, of Boston, has experienced the most decidedly good effects of this medicine in most of the preceding complaints. In one instance, hæmoptoe, or spitting of blood, in a very athletic young man, where the discharge eluded the force of every other medicine, it reduced the pulse in eight hours, from one hundred to fifty pulsations in a minute, and stopped the hemorrhage. He has also given the medicine with complete success in cases of mental derangement.

Foxglove possesses also diuretic power; and has long been employed in dropsy. It unquestionably acts powerfully as a diuretic, or in evacuating the water, in dropsy, and will be found of the greatest utility in every species of this disease, but more especially the dropsy of the breast, where there exists an increased action in the system.

However, from the respectable authority of Dr. Withering, and the celebrated Dr. Darwin, we are assured it had been exhibited with the most happy effects, in cases of extreme debility, where the pulse was feeble, intermitting, and the countenance pale. It should not be given in such doses as to excite much sickness or purge, otherwise it will not produce its diuretic effect. The best rule for its administration, is to commence with the smaller doses, twice or thrice a day, and gradually increase the quantity daily, until the medicine either acts on the kidney, the stomach or the bowels; and on the first appearance of any of these effects, it is to be suspended.

After evacuating the water, tonic or strengthening medicines should be employed. Dr. Currie, another physician of great eminence in England, has employed this medicine with signal advantage in inflammation of the brain, heart, and lungs, and found it also an excellent remedy in the inflammatory rheumatism. The leaves of this plant are the part in use, of which from one to three grains in powder, may be given to an adult twice or thrice a day, alone, or united with some aromatic, or the powder may be formed into pills with soap, or the crumbs of bread, or it may be given in the form of infusion, by infusing a drachm of the dried leaves in half a pint of boiling water, for four hours, adding to the strained liquor one ounce of any spirituous water; from one or two table-spoonsful to be given twice or thrice a day, as a medium dose for an adult. Another more convenient way of ascertaining the dose of foxglove, is by making a saturated tincture of it in proof spirits, which has the two-fold advantage of being invariable in its original strength, and of keeping a long time without losing any of its virtues. Put two of the leaves nicely dried, and coarsely powdered, into a half pint of spirits; let it stand by the fire-side twenty-four hours or longer, fre-



quently shaking the bottle, and thus making a saturated tincture of foxglove, which must be poured from the sediment, or passed through filtering paper, From twenty to sixty drops of the tincture may be taken in a little mint-water, or tea, two or three times a day. This medicine has also been externally applied with good effects. An infusion of it is recommended as a good wash for painful cutaneous eruptions, or ulcerations. An ointment prepared by simmering the leaves in lard or fresh butter, has been found successful in scrofulous ulcers and scald head.

**FRENCH APPLE.** See *Thorn Apple*.

**FROSTWORT, *Systis Canadensis***—Grows in woods, about two feet high, leaves small and numerous, of a whitish color, like frost; the stalk purple; flowers of a pale color, producing a small pod with very small seed.

It is said, in case of scrofula, or king's evil, an infusion of the leaves, a handful to a quart of boiling water, in doses of a tea-cupful three times a day, and the leaves in the form of a poultice, applied to the swelling twice a day, has performed cures.

**FUMITORY, *Fumaria Officinalis***—Grows in corn fields, and by fences, and rises a foot high; leaves pale green, and the flowers of a reddish purple. The leaves, in the form of infusion, a handful to a quart of boiling water, and taken in doses of a tea-cupful thrice a day, are esteemed a good medicine in scabby eruptions, and all cutaneous diseases, particularly if the eruptions be washed with the infusion.

**GARGET.** See *Poke Weed*.

**GARLIC, COMMON, *Allium Sativum***—Is highly stimulating, and, therefore, useful to persons of cold, phlegmatic constitutions. It provokes the appetite, assists digestion, removes flatulence, promotes expectoration and urine; and hence has long been used in scurvy, asthma, and dropsy.

Where it cannot be taken in substance, the best form is either in syrup or pills. Externally applied, it blisters the skin. A poultice or cataplasma of equal parts of bruised garlic and crumbs of bread, mixed with sharp vinegar, applied to the soles of the feet, in the low stage of acute disorders, or nervous fever, is good to raise the pulse, and relieve the head. Sydenham says it exceeds all other applications for occasioning a revulsion from the head, and that the efficacy of garlic, thus applied every night, until slight inflammation be produced, is superior to Spanish flies. It is an excellent remedy in cases of croup, or violent sore throat. (See *Onions*.)

It will also be found a good application to the pubes in producing a discharge of urine, when its retention has arisen from want of due action of the bladder. When made into

an ointment, it is said to disperse cold and indolent tumors, and has been esteemed for its efficacy in cutaneous eruptions. In deafness, a small clove of the root, wrapped in gauze, cotton, or wool, moistened with the juice, and introduced into the ear, has frequently proved an efficacious remedy, if repeated twice or three a day.

**GENTIAN**, *Gentiana*—Grows on the sides of roads, and in waste pastures, two or three feet high. The stem is strong, smooth, and erect; the leaves, which rise from the lower part of the stem, are spear-shaped, large, ribbed, and rough: flowers yellow, in whorls, terminating in yellow bitter berries.

Its virtues are equal to the imported. It has long occupied the first place in all recipes for bitters, whether used to provoke the appetite, or give tone to the system. It may also be taken in the form of infusion, a small handful of the root to a quart of boiling water, in doses of a tea-cupful three or four times a day.

In the form of a decoction, it is used with decided advantage in pneumonia cases, where the fever is nervous, and it acts as a tonic and sudorific; a tincture of it is esteemed as a remedy in dyspepsia, given in doses of one-fourth or half an ounce. It is said to increase the appetite, prevent the acidification of the food, and to enable the stomach to bear and digest articles of diet, which before produced oppression and dejection of spirits.

**GILLENIA, COMMON**, *Gillenia Trifoliata*—Grows in woods, in light soil; flowers in June and July; and has commonly a number of stems from the same root which are a foot or two in height, erect, slender, smooth, of a reddish tinge, and considerably branched. The leaves are alternate, and slightly toothed; the flowers few in number and scattered; and the root branched and knotty. The roots, when boiled in water, imparts to it a beautiful, deep red color and an intensely bitter taste. This plant has long been known to practitioners as an emetic. Professor Bigelow adds his testimony of its possessing properties in a certain degree analogous to those of ipecacuanha. Dr. de la Motta, of Charleston, S. C., testifies to its efficacy, as an emetic both upon an empty stomach and a full one.

Twenty or twenty-five grains, divided into four equal parts, each taken every fifteen minutes, are the proper dose.

**GINSENG**, *Panax Quinquefolium*—Is thinly scattered throughout the mountainous regions of the northern, middle, and western states, between the 38th and 47th degrees of north latitude. It inhabits rich, shady woods, the declivities of mountains, and the banks of torrents. The stem is smooth, round, and green, regularly divided at the top into three

branches, with a flower stalk in the centre. It flowers in July, and has red berries. The root consists of one or more fleshy, oblong portions, of a whitish color transversely wrinkled.

This plant is precisely the same with the Asiatic, the roots of which are so highly valued in China. The Chinese consider the ginseng as possessing unequalled medicinal powers, and their physicians have written many volumes upon the qualities of the plant. It is made an ingredient in almost all remedies which they give to the nobility, its price being too expensive for the common people. The sick take it to recover health, and the healthy to make themselves stronger and more vigorous. They affirm that it removes all fatigue, either of body or mind, dissolves humors, cures pulmonary diseases, strengthens the stomach, increases the vital spirits, and prolongs life to old age. Its price at Pekin, according to travellers, has been eight or nine times its weight in silver, and even more.

The report of the high value of the ginseng in China led to an inquiry among Europeans, whether the plant was not to be found in parallel latitudes in the forests of America. Father Lafiteau, a Jesuit, after much search in Canada, found the plant in the year 1717. The French and the Anglo-Americans commenced the collection of the root, and large quantities were exported. The first shipments to China proved extremely profitable. In a short time, however, the supply overstocked the market, the Chinese began to think the American ginseng inferior to the Tartarian, and its value depreciated, so that it ceased to be an object of profitable commerce. Its demand has not materially risen at any subsequent period, though it is still occasionally exported. The Chinese most readily purchase the forked or branching root; and those exporters have been most successful who have prepared their ginseng by clarifying it after the Chinese manner. They dip it in scalding water, and scour it with a brush. The roots are then prepared with the fumes of a species of millet, to give them a yellow color. The millet is put in a vessel with a little water, and boiled over a gentle fire. The roots are placed over the vessel upon transverse pieces of wood, being first covered with a linen cloth or another vessel. When treated in this way, they assume, upon drying, a horny or semi-transparent appearance.

The roots may also be dried in the sun, or by the fire, and retain their qualities perfectly. In this case, however, they have not that yellow color which the Chinese so much desire.

As far as ginseng has been tried in this country, and in Europe, its virtues do not appear, by any means, to justify the high estimate of it by the Chinese. That is not a very active substance, is proved by the fact, that a whole root may be

eaten without inconvenience. Its place in the *Materia Medica* is among demulcents.

It has an agreeable taste, consisting of a mixture of sweet and bitter, with some aromatic pungency. Dr. Fothergill tells us that "in tedious chronic coughs, incident to people in years, a decoction of it has been of service. It consists of a lubricating mucilage, combined with some degree of aromatic warmth." Ginseng is principally used as a cordial; many persons chewing it or taking it steeped in wine or spirits, in doses of a wine-glassful twice a-day. As a masticatory, ginseng is innocent and refreshing. It forms an excellent substitute for tobacco. I have repeatedly prescribed it to those whose constitutions have been injured by the immoderate use of tobacco, and, in every case, have witnessed the most beneficial consequences from its use. It is necessary, however, that the saliva should be swallowed.

**GOLDEN ROD, OR THREAD.** See *Mouth Root*.

**GOOSE GRASS, *Galium Aparine***—Called by some Poor Robin's plantain, from its efficacy in curing the gravel.

Grows in hedges, low grounds, and near brooks, to the height of five or six feet, climbing on the brushes near it. The upper side of the leaves is white, with sharp prickles; the flowers small, and divided into four segments: these change into a fruit rather large, composed of two berries slightly adhering together and covered with hooked prickles, containing two seeds.

The leaves in the form of decoction, a handful to a quart of water, are highly celebrated as a remedy in gravel complaints, and suppression of urine, in doses of a tea-cupful every hour or two, until relieved. It has also been recommended in the cure of scurvy, spitting of blood, and epilepsy or fits.

**GROUND HOLLY, *Pyrola Umbellata***—It is sometimes called Pippissewa, which is its Indian appellation. It possesses in an eminent degree, the same properties as Bear's Wortleberry, which see.

**GROUND PINE, *Arthetica***—Grows plentifully in stony lands about six inches high, sending forth many branches, with small narrow grayish leaves, somewhat hairy; flowers of a pale color, growing from the joint of the stalk, among the leaves, after which some small round husks.

A large handful of the leaves and flowers steeped in a pint of wine, and taken in doses of a wine-glassful twice or thrice a-day, is said to be beneficial in rheumatism and uterine obstructions.

**GROUND PINK, *Silene Virginica***—Called also catch-fly. A decoction of the roots is said to have been found a very efficacious remedy for worms.



GUINEA PEPPER. See *Pepper, Red.*

HART'S TONGUE—Grows among rocks and shady places, the leaves being of a shining black color, long, pointed, and tongue-shaped.

This herb, in the form of infusion, a handful to a quart of boiling water, in doses of a tea-cupful two or three times a day, is said to be a good remedy in diarrhœa and dysentery; and in the form of ointment, prepared by simmering a handful of the leaves in half a pint or more of lard, is a good application to scalds and burns.

HEART'S EASE, OR HERB TRINITY, *Viola Tricolor*—Grows generally in corn fields, producing white and yellow blossoms, intermixed with purple, which flower from May to September.

A decoction of a handful of the fresh leaves, or half the quantity of the dried, in a pint of milk, used daily for some weeks, is said to be a certain remedy for that disorder in children, called *milk scab*, or that species of scald head which affects the faces of children.

HEART SNAKE ROOT—Flourishes in Carolina and Georgia, in rich and high lands, never exceeding the height of six inches. The root is of a very aromatic taste, and the smell somewhat resembling the sassafras. The leaf shaped like a heart, dark green, and very glossy on the upper surface. The juice of the root and leaf pounded together, in doses of a table-spoonful for an adult, is an active and safe emetic; and a decoction in as large quantities, and as frequent as the stomach will bear, is of excellent service in the jail, camp, and nervous fever.

HELEBORE, WHITE. *Veratrum Album*—Grows in wet meadows and swampy places. The stalk is thick, strong, hairy, upright, and usually rises from two to four feet. The leaves are large, oval, ribbed, plated, of a yellowish color, and surround the stem at its base. The flowers are of a greenish color, and appear from June to August, followed each by three flat pods, containing whitish triangular seed. The root is short, commonly near an inch thick, with numerous fibres hanging from it, of a brown color externally: it has, when fresh, a nauseous bitter taste, burning the mouth and fauces; and, snuffed up the nostrils in very small quantities, excites most violent sneezing.

Every part of this plant is extremely acrid and poisonous. By the hand of skill, it has been employed internally, with beneficial effects, in several obstinate diseases, as those of the melancholic and maniacal kind, and epilepsy, king's evil, herpetic, and other cutaneous affections. In these complaints, the bark of the root, collected in the spring, has been given in the form of powder, beginning with half a grain at a dose,

and gradually increasing the quantity daily, according to its effects.

The American species, says Dr. Thatcher, very probably possesses all the properties of the foreign officinal root.—It is undoubtedly a plant of highly active powers, meriting a particular investigation as an article of our *Materia Medica*. In fact, a new interest has lately been excited both in Europe and the United States, relative to the properties of white hellebore. It is even supposed to be the basis of the French specific remedy, called *Eau Medicinale d'Husson*, so highly famed for its almost infallible powers in the cure of the gout, as to command the enormous price of from one to two crowns a dose. This remedy was discovered about forty years ago by M. Husson, a French officer, who affirms it to be prepared from a plant whose virtues were before unknown in medicine; and it has long been celebrated in France, and other parts of the European continent.

The importance and popularity of the subject were incitements to various attempts for that purpose, and to the ingenuity of Mr. I. Moore, member of the royal college of surgeons, London, the public are indebted for a composition, which if not identically the same, bears a strong resemblance to the *Eau Medicinale*, in smell, taste, and dose; and also in all its effects, as far as it has been tried, in the cure of gout.—The composition of Mr. Moore consists of wine of opium Sydenham, one part; wine of white hellebore, three parts, made by infusing for ten days, eight ounces of the sliced root of that plant, in two and a half pints of white wine, and strained through paper. This compound, when exhibited in doses from one to two drachms, has, in a variety of instances, effected a speedy cure of gouty paroxysms. There are, indeed, well attested facts, where the most painful gouty affections have yielded to a single dose of about one drachm; and the instances of its failure have hitherto, it is believed, been more rare than can be said of any other remedy. The employment of the composition of Mr. Moore, has also, in the hands of respectable physicians, been extended to acute rheumatism, and to some comatose affections, with the most decided advantage; and a perseverance in similar trials is strongly recommended. Its operation may be promoted by some aromatic, or by peppermint, pennyroyal, or ginger tea. It in general occasions some nausea and vomiting, followed by bilious stools. Externally applied in the form of ointment or decoction, it cures the itch, and other cutaneous affections. An ointment is prepared by simmering the root slowly in hog's lard. The decoction is made by boiling two ounces or a handful of the root bruised, in a quart of water, to a pint and a half, and then strained. The addition of a few ounces

of lavender, rose, or lemon water, may be made, if convenient. With this the parts affected should be washed twice or thrice a day.

**HEMLOCK**, *Conium Maculatum*—Grows to the height of six or seven feet, in rich land, near ditches, and in moist, shady places. It is an umbelliferous plant, with large leaves, of a dark green color on the upper side, and a whitish green underneath; much resembling parsley, especially the leaves of the smaller sorts, whose poisonous quality is the most violent. The stalk is round, smooth, hollow, and marked with brown or red spots; the flowers are white; the seeds greenish, flat on one side, very convex, and marked with five furrows on the other. The root is long, yellowish without, white and fungous within, and somewhat resembling a carrot. It changes its form according to the season; and the leaves have a rank smell, resembling the urine of a cat, but do not much affect the taste.

This poisonous plant possesses great medicinal virtue when judiciously employed. It has been used with considerable advantage in painful cancerous ulcers, venereal ulcerations, cutaneous affections, gleet, painful discharges from the vagina, and in a variety of cases of scrofulous affections.—It has also been of great efficacy in epilepsy, chronic rheumatism, and jaundice. Externally applied, it has been useful in discussing scirrhus tumors, particularly those of a scrofulous nature.

The proper method of administering hemlock, inwardly, is to begin with a grain or two of the powder of the leaves, or the inspissated juice, and gradually to increase the dose until the head is affected with slight giddiness, or it occasions some sickness, and trembling agitations of the body, or produces one or two evacuations the morning after the dose.—One or more of these symptoms are the evidences of a full dose, and these continue until none of these effects are observed; and then, after a few days, increase the dose; for little advantage can be expected but by a continuance of full doses.

The dried leaves are less liable to injury from keeping than the inspissated juice. The leaves should be collected in June, when the plant is in flower, and its peculiar smell strong. The drying of the leaves should be performed quickly before a fire, on tin plates. The proof of the drying having been well performed, is the powder's retaining the odor of the leaves, and the deepness and freshness of the color. It should be kept in close vials, and secluded from the light.

**HENBANE**, BLACK, *Hyosciamus Niger*—Grows at the sides of fences, about old ruins, and on dung-hills, and with the dung is sometimes carried into gardens, where, from its



similitude to parsnips, it is mistaken for them; and when eaten, produces stupor and apoplectic symptoms, terminating in death. It rises from one to two feet in height; the stalks are thick, woody, irregularly branched, and covered with a hairy down, the leaves surrounding the stalk at their base, stand irregularly; they are large, soft, and downy, pointed at the ends, and very deeply indented at the edges; their color is a grayish green, and they have a disagreeable smell; the flowers are large, egg-shaped, and of a dirty yellowish color, with purple streaks. The root is long, tough, white, and when recently cut through, smells like liquorice.

According to Dr. Stork, the juice of this poisonous plant inspissated, and exhibited in doses of from one grain to twenty, every twenty-four hours, has relieved many from palpitation of the heart, a tendency to melancholy, coughs, and other spasmodic disorders and convulsions, and this after other means and failed.

HERB BENNET. See *Avens*.

HERB TRINITY. See *Heart's Ease*.

HOGBED, OR HOGWEED, *Ambrosia*—Grows near farm yards, and on stony soils, like moss, about three inches high. The leaves are of a deep green color, small and curly. The hogs delight to make their bed on it, from whence it derives its name.

A handful of this plant infused in a quart of water, and given in doses of a tea-cupful three or four times a-day, is a popular remedy among women to promote the menses or courses.

HOLY THISTLE. See *Thistle, Holy*.

HOODED WIDOW HERB, *Scutellaria Lateraeflora*—Is found in abundance on the banks of rivers, and the borders of ponds, flowering in July and August. The stem is square, branched, and attains the height of from one to three feet. The leaves opposite, narrow pointed, on long foot stalks; the blossoms small, of a violet color, intermixed with small leaves.

Dr. Thatcher has introduced this plant in his American Dispensatory on account of its recently reputed efficacy as an antidote to canine madness. It is directed to be given in the form of a strong infusion of the leaves every morning fasting, and to be continued for several weeks. For cattle, it may be mixed with their food or drink.

HOPS, *Humuli*—Are an agreeable strong bitter, principally used in making malt liquors. They also induce sleep; hence the popular remedy of a pillow of hops to procure sleep in the delirium of fever and insanity, which not unfrequently succeeds. They give out their virtues to spirits or water.

In the form of fomentation and poultice, hops serve as a



most valuable application to ill-conditioned ulcers, or painful cancerous sores.

Mr. Stephen Hammock, assistant surgeon to the royal hospital at Plymouth, gives the following account of the benefit obtained from the external use of hops. "I have seen," says Mr. H., "very good effects from hops in poultices and fomentations applied to ulcers of the worst kind, in more than sixty patients received into the hospital from ships of war. Some of the ulcers proceeded from scurvy, and some from other causes. But though all of them have been sordid, fœtid, and extensive, yet the fœtor has soon been corrected by these applications, and the ulcers have ceased to spread.

A large handful of hops is to be well boiled with a quart of water, to which should be added meal or bran, forming a poultice, applied to the ulcer, without any intervening lint. But, previously to this application of the poultice, the ulcers are directed to be well fomented with the decoction. The pain proceeding from the ulcer is soon alleviated, and the ulcers soon cease to spread. They become clean, and in a state to be dressed with lint, or any soft ointment. (See *Duncan's Annals of Medicine*, also *Medical Repository*.)

Hops form the basis of beer and yeast, of which the following are the most simple, and among the most approved.

*Beer.*—Take fifteen gallons of water, and boil one half of it, or as much as can conveniently be managed; put the part of the water thus boiled, while it is yet of its full heat, to the cold part, contained in a barrel or cask, and then add one gallon of molasses, commonly called *treacle*, stirring them well together; add a little yeast, if the vessel be new, but if it has been used for the same purpose, the yeast is unnecessary. Keep the bung-hole open, till the fermentation appears to be abated, and then close it up. The beer will in a day or two afterwards be fit to drink. A few hands full of hops, boiled in the water, either with a little orange peel, or without, give a wholesomely and pleasant bitter to this beer, and assist in keeping it from turning sour. If tops of the spruce-fir be added to the water which is boiled for making this beer, it is then called spruce beer.

*Extemporaneous Small Beer.*—To two quarts of common porter, add of molasses half a pint, of ginger two drachms, water just warm, four quarts; let the whole ferment in a warm place, then rack off.

*Another.*—Lemon peel one ounce, cream of tartar four ounces, hops one ounce, molasses one quart, ginger one drachm, bruised cloves four in number, boiling water four gallons, ferment with yeast.

*To make Yeast.*—Boil a pint bowl full of hops in two quarts of water to one quart; put eight table-spoonsful of flour into

a pan, and strain the hop water boiling on it; when mixed, it should be thick batter, and when milk warm, stir in it a breakfast cup of good yeast; put it in three porter bottles, stopping them with paper; put them into a milk-pan near the fire; and as soon as the mixture rises to the top of the bottle, remove them to the cellar until it subsides, then cork the bottles, and set them on a cool cellar floor, or in an ice-house. In very warm weather, the corks ought to be taken out every day, to let out the carbonic acid air, and the bottles again stopped.

*Another valuable recipe.*—Boil twelve clean-washed, middle sized potatoes, and at the same time, boil in another vessel, a handful of hops in a quart of water, peel and mash the potatoes in a mortar or bowl; pour part of the hop water, while hot, upon the potatoes, mix them well, and pass them through a sieve, then add the remainder of the hop water, and half a tea-cupful of honey, beat all well, and add a small portion of leaven to bring on the fermentation. Put the whole in a stone jug, and set by the fire, in the winter; all the utensils must be scalded every time they are used, and washed perfectly clean. One tea-cupful of the above potatoe yeast, will answer for two quarts of flour. In summer the yeast ought to be made every second day.

**HOREHOUND**, *Marrubium Vulgare*—Grows among rubbish, flowering from July to September. The leaves have a very bitter taste.

An infusion or tea of the leaves sweetened, is a very common remedy for colds. A syrup prepared by simmering slowly for an hour, a pint of honey in a quart of a strong decoction of plant, is, from my own experience, an excellent medicine in coughs, or any breast complaint, in doses of a small table-spoonful every two or three hours, or oftener, when the cough is very troublesome. In like manner a candy prepared by simmering slowly half a pint of the juice with a pound of sugar, will be found equally serviceable.

In the southern states there is a plant, called wild horehound, growing to the height of one or two feet, of which a tea, prepared by adding one or two handfuls of the fresh leaves, or half the quantity of the dried, to a quart of water, in doses of a gill or more, every two or three hours, acts gently on the skin and bowels, and is used like the Peruvian bark, as a tonic in the cure of ague, and bilious fever.

**HORSE-RADISH**, *Cochlearia Armoracea*—Grows on the sides of ditches and damp places, but is cultivated in our gardens for culinary and medicinal purposes. It has long been known as a most powerful antiscorbutic, and when taken freely, it stimulates the nervous system, promotes urine and perspiration, and is, therefore, usefully employed in palsy, dropsy, scurvy, and chronic rheumatism. The root should be

cut into small pieces, without bruising, and swallowed in the dose of a table-spoonful, without chewing, once or twice a-day, or it may be steeped in wine, and taken in doses of a small wine-glassful.

Upon the authority of the celebrated Dr. Cullen, it is, in form of syrup, excellent in hoarseness, or in the decline of violent cold and pleurisies. Whether externally or internally employed, horse radish proves a stimulant; hence it has been found serviceable by chewing it in palsy of the tongue, and applied in paralytic complaints to the affected parts. The root, scraped, and applied in the form of poultice, to the feet, until some inflammation is reduced, low stages of fever attended with delirium, has also produced good effects.

It is said, the root steeped in vinegar, will remove freckles of the face; if so, it deserves to be tried in cases of ring or tetter worm.

**HOUS ELEEK, *Sempervivum***—Grows on the roofs of houses and old walls, flowering in July.

The juice of this plant, mixed with honey, is said to be of considerable service in the thrush of children. Stewed with cream, it is a great favorite with the country people for the cure of corns, fresh burns, stings of wasps, bees, and other external inflammations. An infusion of the leaves is also said to be cooling and laxative.

**HYSSOP, *Hyssopus***—Is cultivated in our gardens. An infusion of the leaves, sweetened with honey, or in the form of syrup, is useful in humoral asthma, coughs, and other disorders of the breast and lungs, accompanied with inflammatory symptoms.

**ICE-PLANT, *Mesembryanthemum***—Grows in woods to the height of six inches, and becomes white in September; the stalk and leaves are like frozen jelly, and when handled, dissolve as ice.

The root pulverised, in doses of a half or tea-spoonful; in the morning, is said to be a good remedy for children troubled with fits; hence it is called by the country people, *Fit root*. Adults may take it in much larger doses.

**INDIAN HEMP**—Grows in woods, and on the borders of meadows, three feet high, the stalk is bare for a foot, then spring many branches, leaves numerous, flowers whitish, similar to buckwheat, which terminate in seed pods resembling a cucumber.

The bark of the root, in the form of powder, in doses of from twenty to thirty grains, or half a tea-spoonful, will generally operate as an emetic and cathartic. In doses of five or six grains, or a wine-glassful of the infusion, every two hours, promotes perspiration. It has been found beneficial in rheumatism, dropsies, and asthmatic complaints. A table-spoon-

ful of the infusion, half a handful of the bark to a pint of boiling water, given occasionally to children in the whooping-cough, throws off the phlegm, and prevents straining.

**INDIAN PHYSIC, or AMERICAN IPECACUANHA,** *Spiræ Trifoleata*—Grows about two or three feet high, in low woods and meadows.

Professor Barton says, the root, which is the part made use of, is a safe and efficacious emetic.

The celebrated Colonel Bird, of Va., was so enamored of this plant, that he wrote a pamphlet on its virtues, which he found, from great and successful practical in his own very numerous family, to be at least equal if not superior to those of the imported ipecacuanha. In the dose of thirty to forty grains in powder, for an adult, it is one of the most safe and certain emetics. In broken doses of five or six grains, every two hours, it is equally valuable as a sudorific. It may also be given in infusion, a handful to a pint of boiling water, of which a small tea-cupful may be taken every fifteen or twenty minutes until it promotes vomiting.

**INDIAN TOBACCO.** See *Emetic weed*.

**INDIAN TURNIP, *Arum Triphyllum***—Grows in meadows and swamps, six or eight inches high, purple stalks, leaves three in number, roundish, and berries of a bright scarlet color.

It is a very acrid plant. An ointment, prepared by simmering the fresh root in hog's lard, and one eighth part of wax, is said to be a good application in the scald head. From the authority of Professor Barton, we learn that the recent root, boiled in milk, has been advantageously employed in cases of consumption. He even cited a very striking instance. It is also recommended in the asthma, and whooping-cough, in the form of conserve, made of a pound of the peeled root pounded finely in a mortar, with three pounds of loaf sugar; dose a tea-spoonful twice or thrice a-day.

**INDIGO WEED, or WILD INDIGO, *Sophora Tinctoria***—Grows in great abundance on the road sides, and in the woods, and is used by travellers in the middle states to drive away the flies.

A decoction of this plant in large doses, is said to operate powerfully on the stomach and bowels, but in smaller doses of a wine-glassful, proves a mild laxative. An infusion, or tea, is said to be cooling and good in fevers; and, in the form of fomentation and poultice, to arrest the progress of mortification, especially if a little of the infusion be taken internally at the same time. An ointment prepared by simmering the bark of the root in cream, fresh butter, or lard, has been recommended as a good application to sore nipples or ulcers of the breast.



IPECACUANHA, AMERICAN. See *Indian Physic*.

IVY. See *Calico Tree*.

JAMESTOWN, OR JIMSON WEED. See *Thorn Apple*.

JERUSALEM OAK, OR WORM SEED, *Chenopodium Anthelminticum*—Has long been employed to expel worms. One or two tea-spoonfuls of the seed with molasses or honey, are generally given to a child two or three years old, in the morning, on an empty stomach, and the dose is sometimes repeated at bed-time. It ought to be continued for several days. Where there is an aversion to using it in this form, the seed may be boiled in milk, and taken in doses of one or two wine-glassesful, or the expressed juice of the plant sweetened, may be exhibited in doses of a table-spoonful. The oil, which is prepared from the seed, possesses the same virtue, and is found a more convenient form of giving the medicine.

JUNIPER, COMMON, *Juniperus Communis*—An ever-green shrub, growing on dry barren commons, and hilly ground.

A strong decoction, made of a handful of the tops and berries to a quart of boiling water, in doses of a tea-cupful three or four times a-day, has long been employed in dropsy, scurvy, and gravel, or difficulty of urine. The oil of juniper possesses the same properties in a high degree, and imparts them to ardent spirits. The peculiar flavor, and well known diuretic effect of Holland gin, are owing to this oil.

Hoffman found it of great use in debility of the stomach and intestines, particularly in old people. The stronger preparations have been found useful in uterine obstructions, and in paralytic affections of the bladder.

LAMBKILL. See *Calico Tree*.

LAUREL. See *Calico Tree*.

LAVENDER THRIFT, *Statice Limonium*—Grows on the sea-shore, on salt marshes, flowering from July to September. The stem is naked, branched, and about a foot high; the leaves long and pointed; the flowers blue, and growing on long spikes on the tops of the branches.

According to Dr. Hughes, of Providence, and Dr. Baylies, of Dighton, a decoction of the root has been tried with success in apthous state of fever, and ulcerous sore throat, as a most powerful antiseptic. In large doses it operates as an active emetic, and in smaller, as a strong expectorant.

LEMON TREE, *Citrus Medica*—Is now cultivated in the southern states, and holds the first place among the cooling and antiseptic vegetables, to correct the putrid tendency of animal food in summer.

The acid of lemon, from its antiseptic properties, has long been employed as a remedy in the scurvy. Dr. Cutbush says, from the commencement of our navy, it has been used on

board the ships of war with very great success, in preventing, as well as curing, this disease. The fresh fruit is preferred.

Lemon, or lime juice, diluted with water, and the addition of a little sugar, forming lemonade, serve as one of the most grateful beverages in bilious and nervous fevers. When saturated with common table salt, it proves a valuable medicine in dysentary, putrid sore throat, and remitted fever. In diarrhœa and diabetes, where the aliments are apt to run off in their crude state, this mixture is said to be a most efficacious remedy. A table-spoonful of lemon juice, fifteen or twenty grains of salt of tartar, or salt of worm-wood, with the addition of a little water, swallowed in a state of effervescence, is excellent to stop nausea, and allay febrile heat. The acid of lemons is a common remedy against narcotic vegetable poisons, such as opium.

Either of the following methods is recommended for preserving the juice of lemon or limes. Boil the juice after straining, and bottle it, or squeeze the fruit, put the juice and pulp into a bottle, cover the top with an inch of oil, cork and rosin the bottle. The juice is supposed to feed on the pulp. Before using the juice, the pulp and oil must be carefully taken out. The dried peel of lemons is a grateful aromatic, and as a stomachic generally constitutes one of the ingredients of bitters.

**LETTUCE, *Latuca Stativa***—From the fortunate discovery and perseverance of the celebrated Dr. Duncan, the inspissated juice of the common garden lettuce is found to be but little inferior in sudorific powder to opium. In those constitutions in which opium cannot be employed without producing very disagreeable consequences, we may with safety employ, as a sedative, the lettuce opium or tincture. Many eminent physicians bear testimony of the good effects of this medicine in procuring sleep, in alleviating pain, and in allaying inordinate action, particularly a troublesome cough. And in no instance has it been found to produce nausea, costiveness, or irritation of the skin, which generally follows the use of opium or laudanum.

The best method of obtaining the inspissated juice of lettuce in abundance is as follows: Let the ice-lettuce, which is considered best for this purpose, be planted in rows; and when the top of the stem is about a foot above the ground, cut off about an inch from the top of each plant. The milky juice rises immediately above the wounded surface. But it is better to cut off the tops of all the plants before you begin to collect. After having done this, begin to collect the milky juice by means of a wet sponge, where the incision was first made, and as you go along, cut off a thin cross slice

from the stem of each plant, leaving fresh wounds. After going round the plants five or six times in the way mentioned, they will cease to yield any more milky juice at that time. But this process may be repeated two or three times in a day. The milky juice collected in this way is to be expressed into a tea-cup or any similar vessel. It soon acquires a dark brown color, like opium obtained from the poppy; has all its other sensible qualities; and hence it may justly be distinguished by the title of lettuce opium.

It may be administered in the form of pills, in doses from one to two grains. The tincture is prepared by adding one ounce of the extract to a pint of spirits, which may be given in doses of a tea-spoonful.

**LETTUCE, WILD, *Lactuca Virosa*.**—Grows about four feet high, about hedges, and the borders of meadows. It has three different kinds of leaves: those proceeding from the root are slightly toothed; and those attached to the flower stalks are arrow-shaped, pointed, and minute; the flowers are yellow and small; the leaves are milky, and smell like opium.

An extract prepared from the expressed juice of the leaves, gathered when in flower, and given in doses of from five to ten grains, twice or thrice a day, is said to be a powerful diuretic, and of great efficacy in the cure of dropsy.

**LICHEN, OR LUNGWORT, *Lichen*.**—Is a thin shell or skin which grows on the bark of the white oak tree, resembling the lungs, from whence it is called lungwort.

It is said to possess the same qualities as the Iceland Moss, or lichen, so celebrated in the cure of consumption.

An infusion, a handful to a quart of boiling water, used as a common drink, or a strong decoction formed into syrup, with honey or sugar, may be taken in doses of a wine-glassful three or four times a day. It is also said to be a useful medicine in the whooping-cough,

**LIFE-ROOT.**—Grows on the borders of meadows; about two feet high; leaves large and saw-edged; flowers yellow, and the roots small and fibrous.

An infusion of this plant, a handful to a quart of boiling water, taken in doses of a teacupful five or six times a day, is said to be an excellent remedy for the gravel.

**LOBELIA, OR BLUE CARDINAL FLOWERS, *Lobelia Syphilitica*.**—Grows abundantly in the middle and southern States in moist grounds, and near springs; has an erect stalk three or four feet high; blue flowers; a milky juice and a rank smell.

Professor Barton says this plant was purchased from the northern Indians by the late Sir William Johnson, as a remedy in the venereal disease: hence its specific name *syphiliti-*

*ca* He doubts, however, its power to cure the pox; though, from its diuretic quality, it certainly has been found useful in gonorrhœa or clap. He states that many persons in the western country, from their ignorance of botany, have made use of a plant which they call *obelia*, in the venereal complaint. But from the specimen he has received, he believes the plant to be the *seratula spicata* or spiked sawwort. It is a powerful diuretic, and there is good reason to believe that it has been found useful, not only in venereal complaints, but also in cases of gravel. Thus, ignorance sometimes leads to knowledge.

The lobelia is generally administered in the form of a decoction, a handful of the root and leaves boiled slowly in three pints of water to a quart, of which a gill or more may be taken three times a day.

**MADDER, WILD, *Rubia Tinctorum***—Is cultivated in Pennsylvania and South Carolina for dyeing a fine red color, but also possesses great medical powers.

It has been highly recommended in visceral obstructions, particularly of the uterus, in coagulations of the blood induced either by falls or bruises, in dropsical complaints, and especially in the rickets. It may be given in powder from five to fifteen grains to children, and from a half to a whole drachm three or four times a day to adults. When taken internally, it possesses the remarkable quality of tinging the urine of a red color, and produces similar effects on the bones of animals, when eaten with their food.

**MAGNOLIA**—Goes by several names, as beaver-tree, swamp sassafras, elk bark, Indian bark. It is an agreeable aromatic tonic bitter medicine.

An infusion or decoction of the bark has been used in the ague and fever, and is much celebrated among the western Indians as a remedy in rheumatism. I am informed, from a respectable source, that John Dickinson, Esq., author of the celebrated Pennsylvania Farmer's Letters, was completely cured of a violent attack of the chronic rheumatism by a strong decoction of the twigs of the magnolia.

The species *Magnolia Grandiflora*, evergreen laurel, sometimes called tulip tree, grows to the height of eighty feet near Savannah. The bark of the root of this tree is also used as a substitute for Peruvian bark in intermittent fevers. The cones or seed-vessels of the magnolia, which is commonly called *cucumber tree*, has been advantageously used in Virginia in the form of tincture, in rheumatic complaints.

**MAIDEN HAIR, *Asplenium Trichomanes***—Called also milk waste, spleenwort—Grows on old walls, rocks, and shady stony places, generally to the height of seven or eight inches; leaves very fine and soft, and spotted underneath;



stalks of a dark purple color ; flowers from May to October. Its leaves have a mucilaginous sweetish taste, without any peculiar odor.

An infusion, by pouring a quart of boiling water on a handful of the dry herb, sweetened with honey, and taken in the quantity of a tea-cupful every hour or two, or a spoonful in the form of syrup, is said to be good in tickling coughs, hoarseness, and disorders of the breast, proceeding from acrid humors in irregularities of the menses, and obstructions of the viscera.

MALE FERN. See *Fern, Male*.

MALLOW, COMMON, *Malva Sylvestris*—Grows in hedges, footpaths, and among rubbish ; flowering from June to August. The leaves possess a mucilaginous sourish taste.

A decoction of this plant is said to be useful in dysenteries and gravel complaints, though it is chiefly employed as an emollient poultice to produce suppuration.

MANDRAKE, OR MAY APPLE, *Podophyllum Peltatum*—Grows on low grounds, two or three feet high, leaves generally three, broad at the base, and terminating in a sharp point ; flowers yellow ; the fruit resembling a lime, or a small yellow apple, which is much admired by some.

The root is an excellent purgative, and may be taken in doses from ten to thirty grains in substance, or double the quantity infused in a gill of water. Dr. Little, of Pennsylvania, esteems it preferable to jalap. The honorable Paul Hamilton, who often used it, directs equal parts of the juice and molasses to be mixed, and a table-spoonful taken every hour or two until it operates.

The best time of gathering the mandrake, for medicinal purposes, is in autumn, when the leaves have turned yellow and are about falling off. The Indians dry it in the shade, and powder it for use.

MARSH TREFOIL, OR BUCK BEAN, *Menyanthes Trifoliata*—Is a native of Europe and of America. Spongy and boggy soils which are inundated at certain seasons of the year, and are never wholly destitute of water, are the favorite situations of this plant. The root penetrates horizontally into the bog earth to a great distance, and is regularly intersected with joints at the distance of about half an inch from each other. The stalks are long, and from each of them proceed three leaves. Flowers white, tinged with red. The root is intensely bitter, and has long held a place in the European Materia Medica, as a powerful tonic. When given in small doses, of about ten grains, it imparts vigor to the stomach, and strengthens digestion. We are told by authors that it has been employed with advantage in intermittent and remittent fevers. Boerhaave, in his own case of gout, was

relieved by drinking the juice of the plant mixed with whey. Other physicians have found it useful in keeping off the paroxysms of that complaint. Taken by infusion, it also has good effects in some cutaneous diseases of the herpetic or seemingly cancerous kind.

We may regard this plant as one of our numerous vegetable bitters, which are fully equal in strength to imported articles of their class.

**MARSH MALLOW**, *Althæa Officinalis*—Grows in marshes and wet places. The leaves have a soft woolly surface, feeling like velvet. The flowers are of a white pale flesh color, and appear in August.

Every part of the marsh mallow, and especially the root, when boiled, yields a copious mucilage, on account of which it is employed in emollient cataplasms or poultices, for softening and maturing hard tumors. It is likewise of eminent service in the form of infusion, in asthma, hoarseness, dysentery, and gravel.

**MARSH ROSEMARY**. See *Lavender Thrift*.

**MASTERWORT**, *Imperatoria*—Grows in meadows and rich soils, two feet high; leaves, three together, saw-edged, and spear-shaped; flowers in June.

The root of this plant is a warm and grateful medicine in flatulency, weakness of the stomach and bowels, and dropsical affections. It may be taken in the form of powder, decoction, or tincture. One drachm, or a tea-spoonful of the powder, in a glass of wine or spirits, and taken an hour before the fit, has frequently prevented the ague. The decoction or infusion is made of one handful in a quart of boiling water, and the dose is a tea-cupful three times a day.

**MAY APPLE**. See *Mandrake*.

**MAY WEED, OR WILD CAMOMILE**, *Cotula Fætida*—Grows about two feet high, in pastures near fences; the flowers are yellow, resembling camomile flowers, and are frequently used as a substitute for them.

**MEZEREON**, *Daphne Mezereum*—Called also spurge laurel, dwarf bay. Grows plentifully in woods and shady places near the Ohio, and flowers in the month of February or March. The fruit is a berry, in which is found a single seed. The leaves are spear-shaped, and the flowers grow of a beautiful red or rose color.

The bark of the root of this plant is the part used in medicine, and has an extremely acrid burning taste in the mouth and fauces.

Dr. Withering asserts, that a patient who lived under extreme difficulty of swallowing for three years, was effectually cured in two months, by chewing the root as often as she could support its irritating effects. The fresh root scraped

and applied to the surface of the skin, affords an efficacious blister—when taken internally, it determines to the surface, and has been found greatly serviceable in rheumatism and obstinate cutaneous diseases. Its principal use, however, is in the venereal disease, in the last stage, or when mercury has failed. It is particularly efficacious in relieving nocturnal pains, and removing venereal nodes. One gill to a half pint of the decoction, made of two drachms, or a handful of the bard, with an equal quantity of liquorice root, boiled in three pints of water to a quart, may be taken three or four times a day.

**MILK, OR SILK WEED, *Vincetoxicum***—Grows by the road-sides, and on a sandy ground, about three feet high; the stalk square; leaves oval and milky, flowers yellow, which terminate in a pod resembling a cucumber, filled with down, which, when ripe, is blown away.

A handful of the root, boiled slowly in a quart of water for half an hour, and given in doses of a gill or more three or four times a day, is reputed to be an effectual remedy in the cure of dropsy, and serviceable in catarrhs, scrofulous and rheumatic disorders, and gravel complaints.

**MILKWORT, COMMON, *Polygala Vulgaris***—Thrives in dry pastures, and flowers in June and July. Its roots possess an extremely bitter taste, together with all the virtues of the American rattlesnake root.

A table-spoonful of a strong decoction of the root, two handfuls boiled slowly in three pints of water, to a quart, and taken every hour or two, promotes perspiration as well as expectoration, and has, therefore, been used with advantage in colds, pleurisies, and other disorders of the breast.

**MILTWASTE.** See *Maiden Hair*.

**MINT.** See *Peppermint*.

**MISLETO OF THE OAK, *Viscum***—Is to be found on several kinds of trees. That which grows upon the oak is said to have cured epilepsy or fits. It is directed that the misleto be separated from the oak, about the last of November, gradually dried, and when pulverized, confined in a bottle well corked; to be given in doses of a tea-spoonful three or four times a day, gradually increasing the dose according to its effects.

**MOORWORT, BROAD-LEAVED, *Andromeda Mariana***.—Called wicke at the southward. A strong decoction of this plant is extremely useful as a wash in that disagreeable ulceration of the feet, which is called toe-itch, and ground itch, a very common complaint among the negroes and lower class of people in South Carolina and Georgia.

**MOTHERWORT, *Leonurus Cardiacca***—Grows in waste

places, and flowers in July and August. The flowers are in thorny whorls, purplish within, and white on the outside; the leaves are opposite, two to each whorl; they have a strong disagreeable odor, and bitter taste.

An infusion of this plant is a common domestic medicine in fainting and disorders of the stomach. It is said to be peculiarly adapted to some constitutions affected with nervous and hysterical agitations; and that, if taken at bed-side, procures refreshing sleep, when opium and laudanum had failed.

**MOUNTAIN TEA, OR DEERBERRY, *Gaultheria procumbens*.**—It spreads very extensively over the more barren mountainous parts of the United States.

A strong infusion of this plant, a large handful to a quart of boiling water, in doses of a tea-cupful three or four times a-day, is esteemed useful in asthma, and for promoting the menstrual discharge.

**MOUTH ROOT, OR GOLDEN THREAD, *Nigella*.**—Is found in swamps; the stems erect and naked; the leaves grow by threes at the termination of the stems; the white solitary blossoms appear in May; the roots are thread-shaped and of a bright yellow color.

This plant has been supposed to be efficacious, as a local application, in ulceration of the mouth. Its reputation in this case is, however, wholly unmerited, since it possesses no astringent or stimulating quality, by which it can act on the ulcerated spots.

As a pure tonic bitter, capable of strengthening the viscera and promoting digestion, it is entitled to rank with most articles of that kind now in use.

**MUGWORT, OR COMMON WORMWOOD, *Artemisia Absinthium*.**—Grows two or three feet high, on road-sides and among rubbish; leaves deeply divided, pointed; on the upper side of a deep green, and on the under, soft or downy; flowers small and purplish.

An infusion, a handful of the tops to a quart of boiling water, in doses of a tea-cupful, or a tea-spoonful of the powdered leaves three or four times a day, is an admirable stomachic in weakness of the stomach, lowness of spirits, and hysterical affections. It is also said to be a useful medicine in difficult menstruation, in intermittents, jaundice, and dropsical affections. Externally it is applied in the form of fomentation and poultice to resist putrefaction and relieve the pains of bruises, as well as prevent the swelling and discoloration of the part.

**MULBERRY TREE, *Morus, Nigra et Alba*.**—Its fruit has the common quality of all other sweet fruits, quenching thirst, abating heat, and proving laxative in its effects.



A syrup made of the juice of the fruit, serves as an excellent gargle for mitigating inflammations of the throat and ulcers of the mouth.

The bark of the root of the black mulberry tree, in doses of thirty grains, or half a tea-spoonful of the powder, or double the quantity infused in a gill or half a pint of boiling water, or equal parts of a strong decoction and molasses, formed into a syrup, in doses of a wine-glassful, is an excellent purgative, and has been used with success as a vermifuge, particularly for the tape-worm.

The fruit of the common mulberry tree, when properly fermented and prepared, yields a pleasant vinous liquor, known under the name of mulberry wine. Considerable quantities of these berries are likewise consumed in the cider countries, where they are mixed with the apples, in making a delicious beverage called mulberry cider. For this purpose, the ripest and blackest mulberries are selected, and the expressed juice is added to the cider, in such a proportion as to impart a perceptible flavor. The liquor thus acquires a very pleasant taste, as well as a deep red color similar to that of the finest port wine, both of which continue undiminished by age.

MULLEN, *Verbascum*—The leaves, a handful to a quart of milk, is a common remedy in bowel complaints.

In the form of fomentation or poultice, it is employed to relieve the piles, and other painful swellings; and in a dry and pulverised state, to destroy fungous or proud flesh.

MUSTARD, BLACK AND WHITE, *Sinapis Nigra et Alba*—Mustard used with our food, provokes the appetite, assists digestion, and promotes the fluid secretions, and is especially adapted to persons of weak stomachs, or where much acid prevails, as it acts upon the system generally without producing much heat.

A table-spoonful of prepared mustard in a pint of warm water, on an empty stomach, operates as an emetic in nervous disorders. A table-spoonful of the unbruised seed, taken twice or thrice a day, proves a gentle laxative, increases the urinary discharges, and is useful in chronic rheumatism, asthma, palsy, and dropsy. In obstinate intermittents, or ague and fever, or with persons who find the Peruvian bark oppressive at the stomach, a tea-spoonful of the whole seeds, or the flower of mustard, united with the bark or any of its substitutes, will very frequently succeed in the cure, when a pound of bark alone would not produce the desired effect. In languid constitutions, or low stages of fevers, a gill of the seeds mixed with a small handful of horse-radish, and infused in a quart of wine, in doses of a wine-glassful, occasionally, is a most cordial stimulant.

Another excellent form in which mustard may be taken, is that of whey. It is prepared by boiling two or three table-spoonsful of the seeds bruised, in half a pint of milk, and as much water, till the curd be perfectly separated, to which a little sugar may be added, and of this drink, a tea-cupful may be taken three or four times a-day, in nervous fevers.

The powder of the seeds, mixed with the crumbs of bread or flour, and formed into a poultice with sharp vinegar, is an excellent application to the parts affected with rheumatism, and to the soles of the feet, and palms of the hands, in fevers, where there is a languid circulation, or cold extremities, or in cases of delirium.

**NETTLE, STINGING, *Urtica***—The expressed juice of a wine-glassful, or a decoction, one handful to a quart of boiling water, in doses of a tea-cupful three or four times a-day, is said to be useful in jaundice, asthma, consumption, and gravel complaints. It is also said that the flower and seeds, in doses of a drachm thrice a-day, may be substituted for the Peruvian bark in ague and fever. Externally, it has been employed in restoring excitement to paralytic limbs, and other cases of torpor and lethargy. It may be applied by stinging the part with the nettles; or the fresh leaves may be applied to the arms or legs.

**NIGHTSHADE, AMERICAN, See *Pokeweed*.**

**NIGHTSHADE, DEADLY, *Atropa Belladonna***—Grows two or three feet high in hedges, among rubbish, and uncultivated places; flowers dusky brown on the outside, and a dull purple within, appearing single among the leaves in June or July; the berries round, green, changing to red, and, when ripe, of shining black. The whole of this plant is poisonous, and children allured by its beautiful berries, have too often experienced their fatal effects.

Like all other strong poisons, in the hands of skill it performs wonderful cures in palsy, epilepsy, melancholy, jaundice, dropsy, and cancer. "I have," says the great Professor Cullen, 'had a cancer on the lip entirely cured by it.' A scirrhusity in a woman's breast, of such a kind as frequently proceeds to cancer, I have found entirely discussed by the use of it. In the employment of this dangerous medicine, it is necessary to begin with very small doses. Half a grain of the powdered leaves or root, or two tea-spoonsful of the infusion, prepared by infusing twenty grains in half a pint of boiling water, and strained after cooling, is a sufficient dose for adults to commence with. The dose is to be gradually increased, and repeated daily; but as soon as any dangerous symptoms occur, its use ought to be suspended for some days, and afterwards resumed in smaller doses. Externally, the powdered leaves are applied to mitigate the pain in cancer-

ous and other ill-conditioned ulcers, and the leaves, in the form of poultice, to discuss scirrhus and cancerous tumors.

The garden nightshade, growing also on dung-hills, with white flowers, odor of musk, and the berries, when ripe of a shining black, possesses virtues similar to those of the deadly nightshade.

From one to three grains of dried leaves infused in boiling water, and taken at bed-time, will generally induce a copious perspiration, increase the discharge of urine, and operate as a mild laxative on the following day. If after increasing the dose some visible effect be not produced, its farther use will not avail much. The dose is to be repeated every night, or every other night. In the form of poultice, it has abated the inflammation of the eyes, painful swellings, and inflammation of the venereal kind, and scrofulous and cancerous tumors.

The woody nightshade, called also *bitter sweet*, because it is first sweet, and then bitter, grows on the sides of ditches, and in moist hedges, climbing upon the bushes with winding, woody, but brittle stalks. The flowers are in clusters of a blue purple color, appear in June or July, and alway turning against the sun. The berries are red.

This species is not so deleterious as the above two, and it acts more uniformly. Its sensible operation as a medicine, is also by sweat, urine, and stool, and in the form of infusion, said to be eminently serviceable in acute rheumatism. It has also been found efficacious in jaundice, scurvy, obstructions of the menses, and in obstinate cutaneous disorders. An infusion, prepared by adding a pint of boiling water to an ounce or half a handful of the twigs or stalks, either in a fresh or dried state, of which a tea-cupful or more may be taken morning and evening. Another form is made by steeping four ounces of the twigs in a pint of wine. The dose a wine-glassful. In the form of poultice or cataplasm, it is also said to be a powerful discutient of hard tumors. For this purpose boil two or three handful of the leaves in wine or vinegar, to which may be added a little flax-seed, and this to be applied warm to indurated or hard tumors. The application of the juice and leaves to cancerous sores, in some instances, had performed a cure.

**OAK, *Quercus***—The bark of the oak possesses, in a considerable degree, astringent, tonic, and antiseptic properties. Hence, we can never be at a loss for a remedy in those diseases in which the Peruvian bark has been recommended. In intermittents and low stages of fever, in the advanced stage of dysentery, diarrhœa, indigestion, and other diseases by weakness, or loss of tone in the system, I have myself employed internally the black and red oak bark with equal effects, though in rather larger doses than the Peruvian bark. Many cases

have come under my knowledge in practice, of persons, especially children, reduced to mere skeletons, by protracted disease, of bilious fever, nervous fever, and bowel complaints, whose stomachs would not retain medicine, being most wonderfully restored to the blessing of health by bathing in a strong decoction of oak bark, not more than milk warm, twice a-day.

In farther proof of the tonic and antiseptic virtues of the bark, I beg leave to cite the following case from Professor Barton.

"In a case of gangrene of the foot," says this learned professor, "from the puncture of a nail, which came under my notice in the course of last summer, I gave to the patient very large quantities of the decoction of oak bark, at the same time that the affected part was constantly kept wet with the same decoction, or with a poultice made of bread and milk and the bark. I cannot but ascribe the recovery of my patient to the use of these means, and I am emboldened to recommend the use of this cheap remedy, as one highly worth attention in similar cases."

OAK POISON. See *Poison Oak*.

ONIONS, *Allium Ceba*—Possess similar virtues with the garlic, only in a less degree. The disagreeable smell which they impart to the breath, may be effectually obviated by eating a few leaves of parsley immediately after the onions.

Onions are justly reputed an efficacious remedy in suppression of urine, in dropsies, and in abscess of the liver. The following exemplification of the virtue of onions in liver complaints, deserves the attention of the reader.

Captain B. Burch, of the District of Columbia, was afflicted with an abscess of the liver, deemed incurable by his physicians, and seeing some onions in the room, expressed a wish to eat one. Thinking his case desperate and no longer a matter of any consequence what he ate, his wife immediately gratified his appetite. After eating one or two onions he found himself much better, which induced him farther to indulge his appetite. He subsisted for several weeks entirely on onions, with only the addition of a little salt and bread; and from using this diet he was restored to perfect health, and is now a very hearty man in his 5<sup>th</sup> year. This, with innumerable instances of a similar sort, ought to convince the young practitioner, that in the cure of this disease nature ought always to be consulted, as she seldom or never errs.

Upon the high authority of our virtuous and able statesman, the honorable William H. Crawford, onions externally applied is an invaluable remedy in violent sore throat. This worthy patriot informed me that one of his children being violently attacked with the croup, at his mansion in Georgia, a physi-



cian was sent for ; but before he arrived, the disease became so alarming as to threaten the child with immediate death, if something for its relief were not speedily done. Having heard that an ointment of garlic had been employed with beneficial effects in sore throats, he instantly had some onions beaten, not having any garlic at hand, to which was added a small portion of hog's lard ; and with this mixture, the neck, breast, and back of the child were well rubbed, which, in the short space of an hour, relieved all the distressing symptoms. Another case of croup, cured by this application, came under the notice of Mr. C., in the fall of 1829, as he was travelling from Georgia to the seat of government. A little girl, daughter of the gentleman at whose house he tarried one night, was seized with this alarming malady ; and on his recommending the above remedy, it was employed with the same happy effects.

He also stated to me, that, while in Paris, he was afflicted with a very sore throat, which did not yield to the usual remedies ; he directed some onions to be beaten, and had them applied to the soles of his feet and legs, over which his stockings were drawn. The happy result was, that he had a good night's rest, and in the morning found his throat entirely cured. He communicated the cure wrought on himself to a French lady who was greatly distressed with a sore throat, which induced her to make the experiment, and the fortunate result was very remarkable.

**ORANGE TREE, *Citrus Aurantium***—Is now cultivated in the southern states, and deservedly esteemed for its grateful acid juice, which, by quenching thirst, and diminishing heat, is of considerable use in febrile disorders. From its virtues to resist putrescency, it has always, and most decidedly, held the first place on the list of antiscorbutics.

The following is a recipe for making orange wine :—Take the expressed juice of forty sour oranges, five gallons of water, and fifteen pounds of sugar ; boil the water and sugar for twenty minutes, skim constantly, and when cooled to a proper heat for fermentation, add the juice and outer rinds of the fruit, rasped or sheared off, putting all in a proper keg ; leave it open for two or three days and then bung it close for six months.

**PAPU.** See *Custard Apple*.

**PAPOOSE ROOT.** See *Cohush*.

**PARSLEY-LEAVED YELLOW ROOT, *Zanthoriza Apifolia***—Is a native of the southern states. The stems reach the height of three feet, and are somewhat thicker than the barrel of a goose-quill. The root is from three to twelve inches long, and about the diameter of a man's little finger, sending off numerous scions, sometimes two feet in length, by which

means it spreads considerably. The flowers appear before the leaves, very early in the spring.

Both the stem and the root are of a bright yellow color, and possess a strong and bitter taste. In medicinal virtues, it is nearly allied to the celebrated Columbo root. The powdered stem and root, in the dose of two scruples, are highly recommended in all cases requiring bitter and tonic medicines.

According to Professor Barton, we have a very common plant in various parts of the United States, particularly in the rich soil adjacent to the Ohio and its branches, in the western parts of Virginia, Pennsylvania, and Kentucky, which is commonly called Yellow Root. He describes the root of this plant as being a very powerful bitter, perhaps not less so than the preceding, and very popular as a tonic medicine. The usual forms of administering it are powder, tincture, and infusion. This latter has been employed as a wash in inflammation of the eyes. It is supposed this is the plant which some of the Indians makes use of to cure cancers.

**PARSLEY, WILD, *Petroselinum***—Grows in meadows, and among rocks near the sea; stems firm, near six feet high; long, thick root, strong smell, acrid taste; flowers in July, and kidney-shaped seed, which alone are used in medicine, as a powerful diuretic.

A small handful of the seed, boiled in a quart of water, and sweetened with honey, in doses of a tea-cupful, every hour or two, is celebrated as a remedy in suppression of urine, or gravel complaints.

**PEACH TREE, *Amygdalus Persica***—Both the flowers and leaves are excellent cathartics, and ought to be preserved by every family. A tea-spoonful of a strong infusion, sweetened, and taken every hour or two, will operate mildly on the bowels, without griping as senna does. Of the syrup, prepared by boiling slowly the juice of the leaves, with nearly an equal quantity of molasses, honey, or sugar, a tea-spoonful to children, and a wine-glassful to adults, will also prove a mild laxative medicine. I have myself witnessed its good effects in St. Anthony's Fire and measles, and have no doubt of its utility in other diseases requiring gentle laxatives.

Two of my most intimate friends, on a visit to one of their cotton plantations just settled in the interior part of Georgia, and where there was neither medicine or physician, were taken dangerously ill of the bilious fever. A good neighbor hearing they were ill, went to see them, and prescribed what he called "*an excellent physic*," which was simply a strong infusion of peach leaves, to be taken in doses from a gill to a half a pint every two or three hours. It operated on the stomach, bowels, and skin; and by persevering in the use of it for a few days, they were happily restored to health.

A decoction prepared by boiling a handful of the dried leaves in a quart of water to a pint and a half, and taken in doses of a tea-cupful every two or three hours, is reputed, upon respectable authority, to have proved an effectual remedy in many cases of affections of the kidneys or gravel complaints, as also in cases of voiding blood by urine, which has resisted the usual remedies.

**PENNYROYAL**, *Mentha Pulegium*—An infusion, a handful to a quart of boiling water, the dose of a tea-cupful three times a day, has long been esteemed in hysteric complaints and obstructions of the menses. Dr. Withering says, that the expressed juice of pennyroyal, with a little sugar or honey, a tea-cupful every two or three hours, is a useful medicine in the whooping-cough.

**PEPPERMINT**, *Mentha Piperita*—Is an excellent stomachic in flatulent colics, languors, hysteric cases, and vomiting. The usual modes of administering it, are infusion, the distilled water, and the essential oil. The last, united with rectified spirits of wine, forms the essence of peppermint, so highly esteemed

In nausea, cholera morbus, obstinate vomiting, and griping, peppermint, infused in spirits, and applied, as hot as can be endured, to the stomach and bowels, will be a most valuable remedy.

A lady of Alexandria, was seized with a violent fit of the colic, bringing on a weakness and irritability of the stomach, with nausea and vomiting incessantly. Two eminent physicians sent for, could prescribe nothing that did any service. Doctor Graik being called in immediately ordered a large cataplasm of stewed mint in spirits, to be applied as warm as it could be borne, to the pit of the stomach and abdomen. It operated like a charm. The distressing nausea and vomiting left her, the aperient medicines were then retained, and the obstinate constipated state of the bowels was speedily removed.

To heighten my satisfaction in this cure, it was wrought by a man of whom I can never think without feeling the most tender sentiments of gratitude ; I mean my uncle, Dr. James Graik, with whom I was then a student in Alexandria.

From the double motive of *pleasure* to myself and profit to others, I beg to sketch a short outline of Dr. Craik.

Habits of temperance, early adopted and steadily adhered to, imparted to his constitution, though naturally delicate a degree of vigor and vivacity that carried him through life very pleasurably till his eightieth year. After he retired from practice, he continued daily to take considerable exercise ; and such was his activity, that, but a short time before his death, he walked from his country-seat to Alexandria, a distance of eight miles !

The virtues which adorn the husband, the parent, the friend and the master, have seldom been seen to shine with more durable lustre than in Dr. Craik.

In reward of his virtues, Heaven was pleased to distinguish him with uncommon favors. For upwards of forty years he was honored in an extraordinary degree, with the friendship of the great Washington, being all that time his companion and physician. This, however, was nothing compared to the happiness he enjoyed in marriage with a lady, who, for all the charms "of a mind-illumed face, and the graces of *truth, goodness, and harmony* of love," never had her superior among the fairest daughters of Eve.

"So like an angel did she spend her days,  
So like a blessed saint's, were all her ways,  
So bland, so gentle, all her actions were,  
One would have thought her an *immortal* here."

After more than fifty years of the happiest life, Dr. Craik was removed to those scenes where bliss immortal reign. But their separation was short.

He first deceased, she for a few mouths tried  
To live without him—liked it not, and died.—HEATH.

**PEPPER, RED OR CAYENNE**, *Capsicum Annum*—Is cultivated in our gardens; it is a powerful stimulant, and has been found beneficial in chronic rheumatism. Those who are subject to flatulence will find benefit in using it with vegetables and soup. In case of violent pain or cramp in the stomach, no medicine is superior to a strong infusion of red pepper, one or two pods to a half pint of spirits, in doses of from a half to a wine-glassful. It is also useful, both as a medicine and gargle, in putrid sore throat, when infused in water. Steeped in spirits applied warm to the extremities in chronic rheumatism, or low stages of nervous fever, when the circulation is languid, it has produced the most happy effects.

**PINK ROOT, CAROLINA**, *Spigelia Marilandica*—Grows abundantly in the southern states, and is deservedly esteemed a *vermifuge*, or destroyer of worms. An infusion, a handful to a quart of boiling water, and one or two tea-cupsful night and morning, is the useful form and dose. With the addition of milk and sugar, children will take it almost as readily as their tea. It sometimes occasions disagreeable affections of the eyes; when this occurs, suspend the use of the medicine until these symptoms disappear, and then select from another parcel, or make tea of the tops only, as it is supposed the deleterious effects are in consequence of some other root being attached to it.

Pink root is always considered a valuable medicine in fevers, as is verified daily, when given to children in a febrile



state for a vermifuge, when no other effect has been produced than a removal of the fever.

PISS-WORT. See *Flea Bane*.

PLANTAIN, *Plantago*—Has long been employed as an antidote against the bites of snakes, spiders, and other venomous insects. The juice, when extracted from the whole of the plant, is generally given in doses of two table-spoonsful every hour, or oftener, until the patient be relieved. It is sometimes given in conjunction with horehound or rue. The leaves, bruised, are considered, by some, a good application to fresh wounds.

PLEURISY ROOT, *Asclepias Decumbens*—Has a variety of names, as butterfly weed, flux root, decumbent swallow-wort. It is a beautiful plant, growing two or three feet high, under fences and upland pastures. The flowers are of a bright orange color, and appear in July and August. These are succeeded by long slender pods containing the seed, which have a delicate kind of seed attached to them. The root is spindle or carrot-shaped, of a light brownish color on the outside, white within.

This plant possesses great medicinal virtues, and ought, therefore, to be cultivated in our gardens. It has long been employed as a remedy in the treatment of violent cold and pleurisies. No medicine is better cultivated than this to produce general and plentiful perspiration without heating the body, and hence its well merited fame in curing the disease, which name it bears. Mr. Thompson Mason, of Virginia was among the first who noticed the virtues of this plant, and from his long experience of its utility in pleurisy, recommended it as a specific. He states, that after the use of an emetic, and the loss of some blood, in the incipient stage, he administered, of the pleurisy root, finely powdered, as much as would lie upon the point of a case-knife, in a cup of warm water, and repeated the dose every two hours until the patient recovered, which happened frequently in a very few days. By these simple means, Mr. M. cured great numbers.

We have, also, many of the most respectable physicians celebrating its virtues in pleurisy, and other recent affections of the breast. A tea-cupful of a strong infusion, a handful to a quart of boiling water, is given every two or three hours. Professor Barton says the root of this plant in powder possesses a purgative quality, and that he has used it with advantage in dysentery. In Virginia, also, it has been used with great effect in this complaint. This root is frequently resorted to by country people for the relief of pains of the stomach from flatulence and indigestion; hence it is called, by some, *wind-root*.

The late Paul Hamilton, Esq., ascribed the same virtues

of curing pleurisics and dysentery to a plant that grows in South Carolina, and which is also called PLEURISY ROOT, *Asclepias Erectus*. He thus describes it:

"It grows in rich high lands. The root has the appearance and taste of a small, long, sweet potato; the stalk erect; the leaves resembling the persimmon leaf, is situated traversely, and when broken, it throws out a viscid milk; blossoms in May and June. The blossoms are a cream color, with purple centres. Twenty grains of this root, in powder, he says, given in warm water or tea, is excellent in flatulent colic; and the same quantity repeated every two hours, in pleurisy, will seldom fail to bring on a perspiration, while the pectoral effects are admirable."

POISON OAK, *Rhus Toxicodendron*—Embraces several species, the most dangerous of which is the swamp sumac. The poison may be communicated, not only by the touch, but also by the smoke, smell, or steam, producing an eruption on the skin, with pain and itching, and sometimes attended with swollen head and fever. One of the best remedies which has come under my notice, is a wash of crude sal ammoniac and corrosive sublimate, two drachms of the former to one of the latter, in a quart of water, used externally twice or thrice a day, with a dose or two of salts, or an infusion of senna and salts. I have lately been informed, from a source which can be relied on, that LIME-WATER excels any other application as a wash in this distressing affection of the skin. The species called some times poison wood, has a low shrubby stalk, the berries round, and of a yellow gray color when ripe. Dr. Anderson, of Hull, has employed the leaves of this species in doses from half a grain to four grains, three times a day, with success in paralytic cases.

Poison vine, called also poison creeper, has a slender stem, and frequently climbs to the top of our tallest trees. The flowers, which appear in June, are small, of a light yellow color, and have a delightful odor. An extract of the leaves, two grains to a dose, and increased, has been successfully employed in paralytic affections, as well as an infusion in tetter-worm and scald head.

Professor Barton says, that a decoction has been used with seeming advantage in cases of consumption; and others say that a decoction of the root is serviceable in asthma.

POKE WEED, *Phytolacca Decandra*—Is known by a variety of names, as American nightshade, coacum, garget, skoke. The berries, steeped in spirits, have long been employed in the chronic rheumatism. It has, however, sometimes failed, which may have been owing to the peculiarity of constitution, or to the inertness of the bounce or tincture from age, an effect often observed by Professor Barton, as

also by myself. From the authority of this learned professor, the juice of the ripe berries, inspissated to the state of an extract, and spread upon a rag, or upon a leaf of the plant, is an excellent application to scrofulous or indolent tumors. The juice of the leaves has been applied in the same manner with equal advantage. An ointment of the leaves, with lard, is good in various kinds of ulcers. The roots, bruised, are sometimes applied to the hands and feet of the patients in ardent fevers. To make an extract, expose to moderate and continued heat, the juice of the berries or leaves, until, by evaporation, it thickens to the consistency of honey. It may also be made from the root, which is equally efficacious. Boil the roots for some time, strain the decoction, and then reboil it to a thick consistency. Other virtues have been recently ascribed to this plant by respectable physicians.

An infusion of the leaves is recommended externally as an admirable remedy for the piles. One ounce of the root steeped in a pint of wine, and given to the quantity of two table-spoonsful, is said to operate mildly as an emetic. It is also said that this plant may be relied on as an efficacious remedy for the venereal disease, in its various stages, even without the aid of mercury.

From my own experience of the virtues of poke weed, I can recommend it as a most valuable medicine in rheumatic and gouty affections, as also in nocturnal pains, and obstinate ulcerations in the venereal disease, brought on by the excessive use of mercury. The usual form of exhibition is the bounce, a wine-glassful three times a day. The bounce is prepared by filling a jug with the whole berries when ripe, and then pouring as much spirits to them as the vessel will contain.

An ointment, prepared by simmering slowly the leaves, or a handful of the root scraped in a pint of hog's lard, with a small portion of bees-wax, has been used with great success in cancers, and various kinds of ulcers.

**POLYGONUM**—An infusion of it, as a diet drink, is a powerful promoter of urine, and very useful in gravel complaints.

**POLYPODY, COMMON**, *Polypodium*—Grows on old walls, shady places, and at the roots of trees, flowering from June to October. The root has a sweetish taste, but by long boiling becomes bitter. An infusion of half an ounce of the fresh root in half a pint of boiling water, in doses of a wine-glassful every hour or two, operates as a mild laxative.

**POMEGRANATE**, *Punica*—Is cultivated in the southern gardens. The fruit is agreeable to the palate, and possesses the properties of subacid fruits. Its rind, boiled in milk, and

drunk freely, or in powder, a tea-spoonful a dose three times a day, has been used with success in diarrhœas, dysenteries, and other diseases requiring astringent medicines. The flowers possess the the virtues of the rind, only in a less degree.

**POPLAR TREE, OR WHITE WOOD, *Liriodendrum Tulipifera***—The bark of this noble tree, as well as the root, is a very strong bitter, and considerably aromatic.

In intermittents, in the last stage of dysentery, and other disorders requiring tonic medicines, it is considered but little inferior to the Peruvian bark, and is generally employed in similar doses and forms.

Professor Bigelow states that the bark is acceptable and apparently useful to patients who have derived occasional benefit from "Huxham's tincture," "Stoughton's elixir," and similar compositions of bitter and aromatic drugs.

There is another species of poplar, the aspen tree, *populus tremula*, the bark of which, according to Professor Barton, is also an excellent tonic and stomachic.

**POPPY, WHITE, *Papaver Somniferum***—Grows in our gardens, and yields a juice which when inspissated to a proper consistence, is called opium.

According to the experiments of Doctor S. Ricketson, of Dutchess county, New York, the opium obtained from our poppies, is equal, if not superior, to the imported. With respect to the method of cultivating the plant, and preserving the opium, we shall insert the directions given by Doctor Ricketson.

"The poppy seeds should be planted about the middle of May, in rich moist ground, an inch deep, and ten or twelve inches apart, and kept clean. When the plants have arrived to the state of flowering, on a sun-shining day, cut off the stalks at about an inch distance from the flowers, and as soon as the juice appears, which it does at first equally well on the part of the stalks cut off with the flowers, as on the standing part, collect it with a small scoop, or penknife. After the juice ceases to appear on the standing stalk, it should be cut off about an inch lower, when it will be found to yield almost as freely as before, and repeated as long as any juice appears. The juice, when collected, should be put into an evaporating pan, placed in the sun's heat, and frequently stirred, till it becomes of a consistence to be formed into pills, or to be made into rolls for keeping and exportation. The quantity of opium that may be preserved, depends very much on the largeness of our plants, and the care used in collecting it. From one poppy plant, I have obtained seven grains of opium. If any would choose to have the opium freed from its impurities, it may be easily done by pressing the juice, before it is inspiss-



sated, through a linen strainer; but if pains be taken, according to the foregoing directions, I believe there will be little or no occasion for it."

A strong decoction of the dried heads mixed with half the quantity of sugar or honey, and formed into a syrup, by simmering slowly by a gentle fire for an hour, is occasionally used in doses of a table-spoonful in coughs and breast complaints, on account of its anodyne effects. Poppy heads are also used externally in fomentations and poultices, either alone or conjoined with the leaves of southern wood, camomile flowers, or other ingredients.

**POTATO, SWEET, *Convolvulus Batata***—From this root Bowen's patent sago is prepared, which forms a very nutritious jelly, like arrow root, and is prepared in the same manner, to which the reader is referred.

The process generally used for procuring the powder of the sweet potato, is to grate the clean roots, wash the mass through brass sieves of different sizes, and collect the flour at the bottom of the vessel which receives the fluid; finally, dry it in pans either by the fire or in the sun.

The vine of the sweet potato supports the famous insect called the potato fly, which, from repeated experiments, is found fully equal in all respects to the best Spanish flies.—The potato flies generally make their appearance about the last of July or August, and may be collected in great abundance morning and evening, by shaking them from the leaves in a vessel of hot water, and afterwards drying them in the sun. These insects also feed upon the vine of the Irish potato. As they can be procured in immense quantities annually, with but little trouble, every family should carefully collect them.

**POTATO. WILD, *Convolvulus Panduratus***—Grows in low grounds and sandy soils, near running water. It trails along the ground several feet, much like a grape vine, the root very large, hard, and white, running deep in the earth; the leaves triangular, the flowers are whitish, with a purple tinge, and bell-shaped. It is called wild rhubarb, and from the article whose name it bears, is employed as a purgative in doses from a tea to a table-spoonful of the powdered root. Professor Barton says that the root, in powder or decoction, has been much recommended in Virginia, and other parts of the United States, in cases of gravel. The decoction is prepared by boiling slowly a handful of the root, sliced or bruised, in three pints of water to a quart, of which, in gravel complaints, a tea-cupful may be taken four or five times a day.

**PRICKLY ASH, AND PRICKLY YELLOW WOOD, *Zanthoxylum***—Possesses the same virtues. Both species are covered with numerous prickles—whence the name. Both the

bark and berry are of a hot acrid taste, and, when chewed, powerfully promote spittle. It is used in this way to cure the toothache, as well as putting some within the hollow, also to cure the palsy of the tongue.

The prickly ash has a great deal of reputation in the United States as a remedy in chronic rheumatism. In that disease its operation seems nearly analogous to that of Meze-reon and Guaiacum, which it nearly resembles in its sensible properties. It is not only a popular remedy in the country, but many physicians place great reliance on its powers in rheumatic complaints, so that apothecaries generally give it a place in their shops. It is most frequently given in decoction; an ounce being boiled in about a quart of water. Dr. G. Haywood, of Boston, states that he took this decoction in his own case of chronic rheumatism, with evident relief. It was prepared as above stated, and about a pint taken in the course of the day, diluted with water sufficient to render it palatable by lessening the pungency. It was warm and grateful to the stomach, produced no nausea nor effect upon the bowels, and excited little, if any, perspiration. There is no medicine which I have found so effectual in relieving nocturnal pains, and disposing venereal ulcers to heal, as the prickly ash in the above form and doses.

A tincture prepared by steeping half a pint of the berries, or a handful of the bark, in a bottle of spirits, is much esteemed as a remedy in doses of a wineglassful, in flatulent colics. It is sometimes employed in this form, in cold phlegmatic habits, afflicted with the rheumatism.

**PRICKLY PEAR**—Grows on sandy lands and rocky places. A large handful of the pear cut in slices, boiled in a quart of milk, and taken in doses of a gill every morning, is reputed to be of great benefit in scurvy, dropsy, cancers, and cutaneous eruptions; and that the inner soft mucilage of the pear, while green, on a rag, to ulcers, morning and night, is very efficacious. It is also said that a fresh piece of the inner side of the pear, applied twice a day to corns, after soaking the feet in warm water, and paring off the horny part, will, in a few days, perform a cure.

**PRIDE OF INDIA, OR CHINA, *Melia Azedarach***—Is now completely naturalized to the southern States. The public walk and streets of Savannah and Augusta are ornamented by rows of this tree, a mile long, which furnish a most delightful shade against the scorching sun, and add not less to the healthiness than to the beauty of these cities. Independently of its luxuriant verdure and cooling shade, it is highly valuable for its medicinal properties, being now ascertained to be one of the best vermifuges in nature.

Many physicians in the southern States have witnessed its

remarkable effects in destroying and dislodging worms. It has even been found a remedy against the tape-worm.

I have not myself made use of this medicine, possibly because of the deleterious effects of the berries on some pigs and a parrot.

In the fall of the year 1796, at a country seat which I then owned, in Lancaster county, Virginia, a sow with eight or ten pigs, came into the yard where I had several trees of the Pride of China, and observing the pigs to eat with avidity of the berries which were dropped on the ground, I had many of them thrown from the tree, and in a few hours all the pigs were seized with the common symptoms of inebriation, and died. The sow did not appear to be the least affected, although she also ate of them. The death of the pigs would not have operated so strongly on my mind, had it not been for a parrot, which not long after fell a victim to these berries. This enchanting bird, which spoke many words as plainly as a human person, and which for several years had been a pet in the family of Dr. Andrew Robertson, the father of Mrs. E\*\*\*\*, had not long arrived at its new home, before it was tempted to eat of the fruit of this tree. A gentleman who was not apprised of the deleterious properties of this berry, presented the much admired Poll with one of them, which she soon ate, and relished it so well, as loudly to call out, "give me some more! give me some more!" After consuming several, she in a short time fell into a state of stupefaction, followed by violent purging, which soon terminated her existence.

The common modes of using this medicine, are the infusion or tea, and saturated decoction. Of the former, a handful of the bark to a quart of boiling water, is given in doses of a small teacupful morning and night. The decoction is made by boiling a large handful of the fresh bark of the root in three pints of water to a quart, which is given to children in doses from a half to a whole wine-glassful. Dr. Kollock, of Savannah, observes, when exhibited in the latter form, every three hours, until it operates, he has found it beneficial as a febrifuge in those affections usually denominated worm fevers, but where no worms are voided. The pulp which invests the stone of the fruit, pounded with tallow, has been successfully employed in cases of scald head. Would not an ointment prepared by slowly simmering the root in hog's lard, be found also an excellent application to that loathesome disease; also to tetter worms and ulcers?

PUCCOON. See *Blood Root*.

QUEEN OF THE MEADOWS—Grows in hedges, and on the sides of meadows, about four feet high; the stalk red-

dish, leaves long, spear-shaped, and opposite each other, flowers purple.

A large handful of the roots boiled in three pints of water to a quart, and given in doses of a tea-cupful every two hours, is said to be an excellent remedy in suppression of urine, and for carrying off the water in dropsy.

**QUINCE TREE, *Pyrus Cydonia***—The liquor expressed from the quince, also the syrup, has frequently been given with great success in nausea, vomiting, and fluxes.

The juice of the quince with sugar, a gallon of one to two pounds of the other, is said to be a most delightful wine. The ripe fruit, sliced and steeped in French brandy or spirits, with a little sugar, or equal parts of the juice and spirits sweetened, forms an admirable cordial and stomachic. The quince makes also a nice preserve, and the seeds a nice mucilage, which, with sugar and nutmeg, is an excellent drink in dysentery.

**RADISH, *Raphanus***—Is esteemed as an antiscorbutic, particularly if eaten with the skin. When old, or after having been kept for some time, they ought to be avoided, especially by persons of weak stomachs, as apt to create indigestion and colic, and to render the breath disagreeable.

**RASPBERRY, *Idaus***—Like the rest of the rich subacid fruit, when ripe, are wholesome and nourishing. Raspberries, as well as strawberries, held in the mouth, will dissolve tartarous concretions formed on the teeth.

**RATTLE, OR SENEKA SNAKE ROOT, *Polygela Senega***—Grows nearly a foot high, the leaves pointed, and somewhat oval; the stalks upright and branched, the flowers white, the root variously bent and jointed, which it is supposed to resemble the tail of the animal whose name it bears.

The first reputation of the Seneka root was one which it divides with a multitude of other plants, that of curing the bite of the rattle-snake. A reward was given by the Legislature of Pennsylvania, to Dr. Tenant, for the promulgation of this supposed property. When, however, we consider the number of cases of recovery from the bite of this serpent, under every variety of treatment, we cannot avoid the conclusion, that these injuries are not necessarily dangerous, and that spontaneous recoveries are, perhaps, as frequent as those which are promoted by medicine.

In violent colds, croup, pleurisy, acute rheumatism, and all inflammatory complaints, I can recommend it as an admirable medicine to promote perspiration. The best form of using it is in decoction, a handful to a quart of water, a wine-glassful to adults, every two or three hours, increasing or lessening the quantity to avoid vomiting and purging.



Professor Chapman recommends it very highly in obstructions of the menses; four ounces of the decoction to be taken in the course of the day, increasing the quantity when the menstrual effort is expected, as far as the stomach will allow. If this excite nausea, aromatics are to be added, as cinnamon, calamus and angelica.

Dr. Archer, of Hartford county, Maryland, was among the first who noticed the efficacy of this medicine in cases of croup or hives.

He directs a teaspoonful of the strong decoction to be given to a child every hour or half hour, as the urgency of the symptoms may demand, and, during the intervals, a few drops occasionally, until it acts as an emetic or cathartic; then repeated in small quantities, to keep up a constant stimulus in the mouth and throat. Patients who use this medicine, should not be permitted to drink any thing whatever for some time after each dose. He employed it in the form of powder in doses of four or five grains, mixed with a little water.

Professor Barton, with his usual candor and liberality, observes, "I am persuaded that the Seneka is a very important medicine in the treatment of this common, and too frequently unmanageable disease; and praise is, in my opinion, due to Dr. Archer for his important discovery, for such I cannot but deem it. That the Seneka is a specific or certain remedy for the cure of croup, I do not believe; but from my own experience, I am led to repose more confidence in the use of this medicine than in any other. I have made use of a very strong decoction of the root. I have always given it in large quantities. It appears to be chiefly beneficial when it occasions an expectoration of mucus, and when it proves emetic. It is also very useful by virtue of its purgative quality. But I have known it occasion very plentiful stools, without benefiting the patient. Indeed, in the exhibition of Seneka, I would rather wish to guard against large purgings. I have sometimes treated my patients almost entirely with Seneka. Even in such cases I have perceived most unequivocal good effects from it; but have more generally given along with the Seneka, calomel, and sometimes calomel combined with ipecacuanha. I have not omitted the employment of the lancet, though this in many cases of the croup is not absolutely necessary, and the use of blisters or sinapisms applied near the seat of the disease. I am happy to close this short notice by observing, that several respectable physicians in Philadelphia inform me that they have used the Seneka with much advantage in the disease in question.

In various forms of dropsy, the Seneka root has been resorted to with advantage, and has received the commendations of Percival, Millman, and some others. Its cathartic and diure-

tic effects are very considerable, when persevered in, in large quantities ; and have, in many instances, effected the dissipation of dropsical swellings. In the prevailing epidemic I have found a decoction of this vegetable, taken freely at the commencement of the disease, a medicine of great utility.

**RATTLESNAKE VIOLET.** See *Violet*.

**RED CEDAR,** *Juniperus Virginiana*—Is found from Lake Champlain to the Cape of Florida. The leaves have a strong disagreeable taste, with some pungency and bitterness. Its most frequent use is in the composition of the cerate employed for keeping up the irritation and discharge of blisters. This preparation is the same with the Savin cerate, used in Europe, the leaves of the red cedar being substituted for the Savin.—When properly prepared by boiling the fresh leaves for a short time in about twice their weight of lard, with the addition of a little wax, a cerate is formed, of peculiar efficacy as a perpetual epispastic. When applied as a dressing to a new vesicated surface, and afterwards repeated twice a-day, it rarely fails to keep up the discharge for an indefinite length of time. Under its operation, the discharge usually changes from a serous to a puriform appearance, and concretes upon the surface ; so that it requires to be removed from time to time, to admit the full action of the cerate.

Internally, the leaves have been found to exert effects very similar to those of the Savin. They have proved useful as an emenagogue, and as a general stimulant and diaphoretic in rheumatism. They have also had some reputation as a diuretic in dropsy.

**RHUBARB, WILD.** See *Potato, Wild*.

**ROSE,** *Rosa*—The hundred leaved, or damask rose, is justly termed the queen of flowers. Otto or essence of roses, is obtained from these by distillation, and is doubtless the most elegant perfume in vegetable nature. Independently of their use in this manner, a decoction of its leaves will be found a mild laxative, and, when formed into a syrup, may be given with advantage to children. The conserve of roses is also prepared from them for medicinal purposes.

**ROSE WILLOW,** *Salix*—Grows near brooks, along the banks of rivers, and on the borders of meadows. It is about the size of an apple tree, and covered with a grayish colored bark, and very red within, with a bunch in the top resembling a bunch of roses.

Four ounces, or a large handful of the bark, boiled in three pints of water to a quart, and taken in doses of a tea-cupful three or four times a-day, is said to be an excellent remedy in cases of gleet, the whites, immoderate flowing of the menses, and in cutaneous eruptions.

**RUE,** *Ruta*—Has an ungrateful smell, and a pungent bitter

taste. The leaves are acrid, and when applied to the skin are apt to produce blisters. Employed in the form of tea, they are reputed to be of great service to persons of cold phlegmatic habits. According to Boerhaave, an infusion of the leaves powerfully promotes perspiration, quickens the circulation, removes obstructions, and is particularly adapted to weak and hysterical constitutions, suffering from retarded, or obstructed secretions.

**SAGE, *Salvia***—An infusion of the leaves or tea, is considered serviceable to persons of cold phlegmatic habits, laboring under nervous debility. Sweetened with the addition of a little lemon juice, it forms an exceedingly grateful and useful drink in febrile disorders.

Sage was supposed by the ancients to possess the virtue of prolonging human life; hence the following verse: "*Cur moriatur homo, cui salvia crescit in horto?*" How can a man die, in whose garden there grows sage? in allusion to its many virtues. What a shameful abuse of this pretended property was made by the late Sir John Hill, in his patent tincture of sage, for the prolonging of human life, and warding off old age, is known to every one.

Such shameless imposition on common sense, deserves something worse than *ridicule*; for deceiving the sick and helpless, they merit the execrations of every man who has one spark of humanity.

**SAMSON SNAKE ROOT**—Grows from six to twelve inches on dry land, and bears on the top two or three pale blue flowers; leaves opposite, sword shaped; the root matted, variously bent, and has an agreeable bitter taste.

Upon the respectable authority of the honorable William Mayrant, of South Carolina, the root of this plant possesses in a very great degree tonic powers. He stated to me, that being himself reduced to a mere skeleton by dyspepsia, or indigestion, and having tried the usual remedies employed in such cases, without receiving any benefit, he was at length induced, as his last hope, to try the virtue of this plant, which had been recommended to him by a negro man. He was directed to steep a handful of the root in a bottle of spirits, of which he was to take half a wine-glassful diluted with water three times a-day; and such was the astonishing effect wrought by this medicine, that in a few weeks his health was perfectly reinstated. He discovered the plant to grow near Fredericksburg, Virginia, and collected some of it to exhibit in Washington. Several persons in delicate health, and troubled with dyspepsia, were readily persuaded, from the recommendations of Col. Mayrant, to make use of his favorite remedy, and not without receiving considerable benefit. It may be taken in the form of powder, tincture, or decoction.

SANICLE, AMERICAN. See *Alum Root*.

SARSAPARILLA, *Smilax Sarsaparilla*—Grows in several parts of the United States. It is a small vine resembling a bramble.

A decoction of sarsaparilla, prepared by boiling a large handful of the root in a quart of water, till the third part be evaporated has long been employed as an auxiliary to mercury, in the treatment of venereal complaints. It promotes perspiration, attenuates viscid humors, relieves venereal headache, nocturnal pains, and disposes venereal ulcers to heal. In rheumatic affections, cutaneous disorders, and scrofula, it is a very useful medicine. It may also be exhibited in the form of powder in doses of two drachms, or extract in doses of one drachm, three or four times a-day.

SASSAFRAS, *Laurus Sassafras*—An infusion or tea of the flowers or bark of the root, has often been successfully given as a sweetener or purifier of the blood, in scorbutic, venereal, and cutaneous disorders, or where an acrimony of the fluids prevails. Conjoined with bark of dogwood, cherry tree or oak, it is very useful in obstinate intermittents. The oil externally applied, in chronic rheumatism, and also in wens, has oftentimes proved salutary. The pith of the small twigs, in water, forms a mucilage of excellent use for sore eyes, and as an injection in the incipient stage of gonorrhœa. It also affords, when sweetened, with the addition of nutmeg; a palatable jelly, useful in dysentery and febrile diseases.

SCULL CAP, BLUE. See *Hooded Widow Herb*.

SCURVY GRASS, *Cochleara Officinalis*—Is a pungent stimulating plant, and in the simple state of a salad, or in the form of expressed juice, a wine-glassful three times a-day, has long been esteemed one of the best of all the anti-scorbutic plants.

SENNA, AMERICAN, *Cassia Marilandica*—Is easily cultivated from the seeds, and ought to be more generally introduced into our gardens.

It has long been employed as a purgative. To increase its effects on the bowels, manna, salts, or tamarinds, are generally added. To correct its ill flavor, and prevent griping, it should be joined with some aromatics, as coriander, or fennel seed, ginger, &c. In the form of decoction, a handful to a pint of boiling water, the dose is a tea-cupful every hour or two until it operates. It may also be exhibited in the form of tincture, to relieve flatulent colics, four ounces of senna to a quart of spirits, with an ounce of coriander seed, or ginger, and a wine-glassful the dose.

SKOKE. See *Thorn Apple*.

SKUNK CABBAGE, *Draconitu Fœtidum*—Abounds in swamps and meadows, and emits a disagreeable smell, nearly



resembling that of a skunk or polecat, and from this, and its leaves resembling those of a cabbage, it has acquired its name.

The roots dried and powdered, have proved of excellent use in asthmatic cases, and often afforded relief in this distressing disease, when other means were ineffectual. It should be exhibited during the paroxysm, and repeated as circumstances may require, in doses of thirty or forty grains. It will be proper to persevere in the use of it for some time after the paroxysm has gone off, until the patient has perfectly recovered.

Dr. Cutler has celebrated its efficacy in his own case of asthma, after other medicines had failed. In one of the most violent asthmatic cases; two tea-spoonsful of the powdered root, in spirits, procured immediate relief; and on repeating the trials with the same patient, it afforded more lasting benefit, than any other medicine. In child-bed it produces the desired effect, in doses of a tea-spoonful repeated occasionally. In numerous other instances of spasm, and also in chronic and acute rheumatism and dropsy, in powder or decoction, it has performed important cures. The seeds possess the same virtues as the root.

Dr. Cutler vehemently cautions, that, in collecting the roots, the white hellebore, or poke root, which some people call shunk weed, be not mistaken for this plant, as the consequence might be fatal. There is an obvious difference, the hellebore has a stalk, but the skunk cabbage has none; and the roots of the latter are much larger than those of the former.

**SNAKE ROOT.** See *Virginia Snake Root*

**SOAPWORT,** *Saponaria Officinalis*—Grows in moist swamps and meadows, particularly on the Ohio river, where it is used as a substitute for soap. It rises about a foot high, the leaves are pointed, and furnished with three ribs, the flowers numerous, large, and of a pale pink color.

A handful of this plant boiled in three pints of water to a quart, in doses of a half pint three or four times a-day, has been found useful in the jaundice, obstructions of the liver, and the venereal disease.

**SORREL.** *Oxalis Acetosella*—Called also sour trefoil, or cuckoo bread, yields, on expression, a grateful acid juice, which has been beneficially used in the scurvy and scorbutic eruptions. An infusion of the leaves makes a palatable diet drink in fevers, and on being boiled in milk, forms an agreeable whey. A conserve made of the leaves, with double their weight of loaf sugar, forms an excellent substitute for lemons, and may be given with advantage in all putrid and other fevers, where antiseptics are indicated. The leaves bruised,

and externally applied to scrofulous ulcers, have produced excellent effects, by promoting suppuration and granulation—  
SOUTHERN WOOD. See *Magwort*.

SOUTH-SEA TEA, OR YAUPON, *Alex Vomotoria*—Grows abundantly in the southern states. It rises about twelve feet high, shooting into many upright, slender, stiff branches, covered with whitish smooth bark; the leaves small, ever-green, and saw-edged; the flowers small and white, and grow promiscuously among the leaves, succeeded by small berries, which become red in October, and remain so all the winter.

It is held in great esteem among the southern Indians.—They toast the leaves and make a decoction of them, which is called black drink.

An infusion, or tea of the leaves, is considered as palatable as Bohea tea, and when used freely, is a powerful diuretic, and hence of service in the cure of dropsy and suppression of urine.

SPIKENARD, *Aralia Racemosa*—Grows in low rich ground and among rocks, to the height of three or four feet; the leaves are many, on long branches, from a thick purplish stalk; flowers very small, of a bluish color, producing berries much resembling those of the elder, of a sweetish pleasant aromatic taste. The roots are very long, and about the thickness of a finger.

A pint of berries steeped in a quart of spirits, in doses of a wine-glassful, is said to be a speedy cure for the gout in the stomach. The roots in the form of infusion, a handful to a quart of water, and given in doses of a tea-cupful three or four times a day, have been found efficacious in gouty complaints. The fresh root, applied in the form of poultice, is said to be excellent for wounds and ulcers.

SPLEENWORT. See *Maiden Hair*.

SPRUCE LAUREL. See *Mezereon*.

SQUIRREL EAR, OR EDGE LEAF—According to the late Paul Hamilton, Esq., is produced on barren pine land, in Carolina and Georgia. It is a species of sage, and very efficacious as an antidote to the poison of the snake bite. It is known by the remarkable characteristic which forms its name; the leaf, instead of the surface, presents its edge to the sun, and is in color and shape very much like the ear of a squirrel, although large. The stalk never rises beyond three feet, and its leaves are alternate and transverse.

A wine-glassful of the juice of this plant has been known to rescue from death persons bitten by the rattlesnake, who were so far gone, as to be incapable of speaking. The flower of this plant is white and fuzzy, and appears in every warm

month in the year; the smell that of mellilot, with a slight tincture of the aromatic.

**STAR GRASS**, *Aletris Farinosa*—Grows in fields and about the edges of woods, and flowers in June and July. The leaves are grass-like, but smooth and stiff, of a willow-green color, and spread like a star upon the ground. "No plant," says Dr. Bigelow, "surpasses this in genuine, intense and permanent bitterness." Hitherto, it has been chiefly used as a tonic, exhibited in small doses.

**STINK WEED**. See *Thorn Apple*.

**STRAWBERRY**, *Fragaria*—The fruit of this plant is delicious, and being of a cooling and laxative nature, may be considered as medicinal. If freely eaten, they impart their peculiar fragrance to the urine, and when retained in the mouth for some time, dissolve tartarous concretions on teeth. They are of great service in cases of scurvy, and, according to Linnæus, a copious use of them has proved a certain preventive of the stone in the kidneys. An infusion of strawberry leaves, while young and tender, makes excellent tea; but for such purposes they ought to be dried in the shade, being slightly bitter and styptic. They have been used with advantage in laxity and debility of the intestines, as likewise hemorrhages and other fluxes. Lastly, they are of considerable service as aperients in suppression of urine, visceral obstructions, and jaundice.

**SUMACH, COMMON**, *Rhus Copallinum*—The berries or seeds, when ripe, are red and very acid. An infusion of them, sweetened with honey, is a good gargle for the sore throat, and for cleansing the mouth in putrid fevers.

Mr. Jesse Torrey considers the bark of the root of sumach to be one of the best antiseptics produced by vegetation. Corroding ulcers, defying every common application, immediately begin to heal by washing them with a strong decoction, and applying the boiled bark as a poultice. He says it is a very important material in decoctions for hectic and scrofulous diseases. Sumach constitutes one of the ingredients of the following recipe, which was handed to me by a gentleman of the first respectability and veracity, as a remedy for the venereal disease.

Of the inner bark of the pine and swamp-elm, and the bark of the root of sumach, take each one pound; boil them in a gallon of water to three quarts, drink half a pint three times a-day; if costiveness be produced, a dose of salts may be used. If there be ulcers, they are to be washed with a decoction made warm. The detergent effects will appear in a very short time. Abstinence from too much stimulants will accelerate the cure. This remedy is one of heaven's best mercies to offending man, and instances can be produced of



the effects of it, which would stagger credulity. Mercury and nitric acid have failed, but this has never been known to fail when properly applied. It is, moreover, a fine application in dysenteric affections.

**SUNDEW, *Ros Solis***—Called also red root, or youthwort. Grows in mossy bogs, flowering in July and August.

The whole of this singular plant is acrid, and its juice sufficiently caustic to corrode corns and warts. It is said the juice, properly mixed with milk, and applied to the skin, will remove freckles and sun-burns.

**SWALLOWWORT.** See *Pleurisy Root*.

**TANSY, *Tanacetum vulgare***—This plant possesses a warm bitter taste, and may be used as a substitute for hops. An infusion of the leaves is recommended for a weak stomach, hysteric complaints, and obstructed menses.

According to Dr. Withering, its seeds are an excellent vermifuge, in doses from a scruple to a drachm, and that if animal substance be rubbed with the herb, it will be effectually preserved from the flesh fly.

**THORN APPLE, *Datura Stramonium***—Has a variety of names, as Jamestown, or Jimson weed, French apple, Stink weed, &c. Its common name, Jamestown weed, is said to have arisen from the circumstance of a number of sailors being violently diseased by ignorantly eating the boiled plant at Jamestown, in Virginia, at its first settlement. It grows among rubbish, and on dung-hills, to the height of two or three feet; flowers in July and August. The corolla is funnel-shaped and plated white, with a tinge of purple. The capsule is large, egg-shaped, and covered with thorns, which have four divisions, and contain numerous kidney-shaped seeds. The leaves are large, egg-shaped, and deeply indented, of a disagreeable smell and nauseous taste.

Every part of this plant is a strong narcotic poison; nevertheless, when judiciously administered, it is unquestionably one of the most valuable medicines in our possession. Professor Barton considers it a medicine of great and invaluable powers, especially in cases of mania, attended with little or no fever, or with a cold skin and languid circulation. The form in which he exhibited it, was of an extract prepared from the fresh leaves, beginning with a few grains and gradually increasing the dose from fifteen or twenty grains. In one case of mania, in a woman, he increased it to sixty grains. In a few weeks it brought on an eruption in various parts of the body, "and she was dismissed," he observes, "from the hospital, perfectly cured." Dr. Fisher recommends it highly in those cases of mania in young persons, where fits occur daily, or monthly, at regular periods, especially if assisted by chalybeates, or such other medicines as



particular symptoms require; but advises the free and regular use of it, one or two doses every day. The most convenient form, especially for children, he thinks, is the saturated tincture; the requisite dose may be known by the dilatation of the pupils.

Dr. Alexander King, of Connecticut, has employed this medicine, in the form of decoction, one drachm of the seed bruised, boiled in half a pint of water to a gill, in several cases of inflammation of the brain, attended with delirium. The following is one of the cases recited by the doctor.

A man of robust constitution, and sanguine habit, about twenty-six years of age, drinking pretty freely, was seized with a slight paroxysm of the apoplexy, which was followed by a cold fever, attended with a violent pain of the head, and delirium. On the second day, I found him delirious, with an inflammation of the brain, or rather meninges. I bled him largely, so that he even fainted in a recumbent posture, which was succeeded by another partial paroxysm, similar to the first. I put him on a course of medicine, nearly the same as prescribed in a former case. The next day I found no abatement of the symptoms; he had slept none for two nights past and was quite outrageous. I then prescribed for him a decoction of the seeds of the *datura stramonium*, and directed the nurse to give him a tea-spoonful every quarter of an hour. I found, on visiting him the next morning, that soon after taking the decoction, he became calm and composed, and went to sleep. I continued the same medicine through the course of the fever, which lasted about seven days, except one day, in which I purposely omitted the use of it, in order fully to satisfy myself as to the operation of the medicine. On that day the delirium returned, and he slept none the night following. The next morning I had recourse to the decoction as usual, and it produced the same salutary effects as before.

In this case, I had a fair opportunity to observe the action of the medicine, in an early stage of the disease, which was cooling, anodyne, and sedative.

As a remedy in epilepsy, Professor Barton thinks it may be relied on even in the most deplorable cases. A lady, aged fifty-five, having, for some months, been afflicted with alarming attacks of epilepsy, by which her powers of intellect and of articulation were impaired, happily experienced a restoration, by taking one grain of the extract once in twenty-four hours. Although she did not suffer another attack, after commencing the course, she found it necessary to continue it for several months, to remove all apprehensions of a recurrence. A single grain seldom failed to excite unpleasant vertiginous sensations, accompanied with efflorescence of her face, and some degree of sleepiness. In asthma and spasm-

dic enough, stramonium is said to have proved essentially beneficial. It is also said to have produced salutary effects in cases of chronic rheumatism, and difficult menstruation.

As this medicine is endued with most active powers, it ought to be administered in very small doses at first, and the quantity gradually increased daily, until it produce, in a slight degree vertigo or dilatation of the pupil.

In the course of my practice, I witnessed the deleterious effects of this plant in a child, who was attacked with convulsions similar to those which attend persons afflicted with the disease termed St. Vitus' dance, accompanied with delirium tremor, thirst, glaring eyes, dilated pupil, and considerable efflorescence of the skin. The parents were perfectly ignorant of the cause of the child's sudden indisposition; but from the symptoms, I was convinced it had taken some of the stramonium, and on making the necessary inquiries, learned that it had been playing with some of the seeds a few hours before. Immediately on visiting the child, I directed the warm bath, and gave it six or eight grains of blue vitriol, which was repeated at the interval of fifteen minutes, before it excited vomiting, when some of the seeds were thrown up. After the operation of the emetic, I administered a large dose of castor oil, which assisted by stimulating injections, produced in a few hours some evacuations, and the child was entirely relieved from all those distressing symptoms. Domestic practitioners will recollect, that two or three grains of blue vitriol is a full dose for adults; and the large dose given in this case, was from persuasion that the child's stomach had been deprived of its sensibility, through the narcotic effects of the poisonous seeds.

The extract may be made by exposing the juice of the plant to the heat of the sun, or by boiling the bruised seed or leaves in water for the space of four hours; then strain off the liquor, evaporate over a gentle fire, without taking off the scum, until it has acquired the thickness of syrup; then place it in a warm oven, in an earthen vessel, until it becomes of a proper consistence for use. The dose is from one to two grains, or more, for an adult. The saturated tincture is prepared by steeping one or two handfuls of the leaves in a half pint of spirits for a few days.

The stramonium has also been employed externally with the most happy effects. In recent wounds, inflammations, or bruises, the leaves, either alone, or united with bread and milk poultice, have been applied to the part with manifest advantage. In the form of ointment, which is prepared by simmering slowly the fresh leaves bruised in hog's lard, with about one-eighth part of bees-wax, for an hour, and then strained through a coarse cloth, it will be found excellent for

the piles, scalds, and burns. From my own observation, it far excels all other applications I have made to obstinate cutaneous sores, ill-conditioned ulcers, and painful cancerous affections.

**THOROUGHWORT**, *Eupatorium Porfoliatum*—Is known also by the following names; thoroughstem, crosswort, boneset, and Indian sage. The first of these names, thoroughstem, has been imposed upon it from the peculiar structure of the leaves, which are opposite, and appear as though the stem were thrust through them. It has received the second name, of crosswort, by which it is known in many parts of Virginia, from the position of the leaves, each pair of which take their organ from opposite sides of the stem, so that they cross each other nearly at right angles. I am at a loss, says Professor Barton, to refer the word *boneset* to its real origin; but I presume the plant received this name from the great relief which on many occasions, it has been found to afford to persons laboring under violent remitting and other fevers, in which the bones are greatly pained. The resemblance of the leaves of this plant to those of the common sage, was long ago remarked by the botanists. Hence the name Indian sage, by which the eupatorium is known in some parts of Pennsylvania.

This plant flourishes in wet meadows, and other moist places. The stalk is hairy, and rises from two to four feet. The flowers are white, and appear in July and August. The leaves at each joint are horizontal, saw-edged, and rough, from three to four inches long, and about one inch broad at the base, gradually lessening to a very acute point, of a dark green, and covered with short hairs.

This plant possesses very active powers, and has been exhibited with uncommon advantage in intermittents, remittents, and other diseases of debility. When exhibited in the form of a warm decoction, a handful of the herb boiled in a quart of water, a wine-glassful every two hours, has proved *peculiarly beneficial*, says Professor Barton, in fevers, by exciting a copious perspiration. In larger doses it proves emetic; with which view it is used, in some parts of the United States, as an excellent remedy in intermittents. The dried leaves in powder, in doses of twelve to fifteen grains, are said to operate gently on the bowels. Every part of this plant may be advantageously employed in practice. The flowers, as a tonic bitter, are deemed equal to the flowers of camomile, for which they might be substituted on many occasions.

This medicine has also been found very efficacious in cutaneous diseases. In a peculiar and distressing affection of the herpetic kind, which was formerly very common in Virginia, and there known by the name of James River ring-worm,



Professor Barton states, from the respectable authority of Doctor Thomas Knox, of Culpeper county, Virginia, that a decoction of this plant drank daily, for a considerable time, made a perfect cure. A wine-glassful of the expressed juice of the green herb drank every hour, is celebrated as a certain cure for the bite of a rattle-snake. The bruised leaves should be applied to the part.

**THROAT ROOT.** See *Avens*.

**THYME, GARDEN,** *Thymus Vulgaris*—Is one of the most powerful aromatic plants, and as such, is frequently employed in the form of tea, in those complaints where the medicines of this class are indicated.

**TOBACCO,** *Nicotiana Tobacum*—This “obnoxious luxury,” is a medicine of the most uncommon powers; being emetic, cathartic, sudorific, diuretic, expectorant, narcotic, and antispasmodic; hence its utility in a variety of diseases.

Happy if this plant “of many virtues” could always be exerted to beneficent purposes, and for which, no doubt, it was intended by the all-wise and benevolent Creator: but alas! we are constrained to deplore not only the idle and expensive, but too often fatal abuse of it, by snuffing, chewing, and smoking practices, which cannot be too severely censured, especially in young persons, and those of weak digestion, consumptive or delicate habits. When used in either of these forms, by persons unaccustomed to its use, it will, in small quantities, produce stupor, giddiness, and vomiting; but like spirits, opium, and other narcotics, the use of it may be introduced by degrees, so that its peculiar effects, even from large quantities employed, seldom appear.

**TOE ITCH,** See *Moorwort*, *Broad-leaved*.

**TOOTH ACHE TREE.** See *Prickly Ash*.

**TOUCHWOOD,** *Boletus Igniarius*—Called also spunk. It is a spongy substance, growing on the white oak, pine, and hickory trees, generally used for catching fire with flint and steel. The heart of that which grows on the oak reduced to powder and applied to violent hemorrhages from wounds, is said to be an excellent application to stop the bleeding.

**TREFOIL, WATER,** *Menianthes*—Grows about twelve inches high, in marshes, swamps, and wet meadows. It bears many elegant flowers, in a spike, which are sometimes white, but are commonly rose-colored on the outside, and in the inside finely fringed; the leaves are three together, resembling our garden beans.

A drachm of the powdered leaves, is said to operate up and down. An infusion of the leaves, two handfuls to a quart of boiling water, in doses of a tea-cupful two or three times a day, is esteemed a useful medicine in chronic rheumatism, in scorbutic complaints, and in all impurities of the blood.



**TULIP-BEARING POPLAR.** See *Poplar White*.

**TURMERIC.** See *Blood Root*.

**UNICORN ROOT, *Aletris Farinasa***—Grows in meadows, and on the sides of mountains, about six or seven inches high; leaves spear-shaped, lying on the ground, and are green all the winter. The flowers grow on the stalk from the ground, which hang down at the top when fully blown; the root is whitish, full of small fibres, about the thickness of the end of the little finger, and crooked at the end.

The powdered root, in doses from half to a tea-spoonful, is said to afford relief in hysteric, and flatulent or wind colic. A large handful of the root steeped in a quart of spirits, in doses of a wine-glassful three times a day, is highly esteemed by some as a valuable remedy in chronic rheumatism.

**VALERIAN, WILD, *Valeriana Officinalis***—Grows abundantly in the vicinity of the Ohio river. It rises two or three feet high; the leaves in pairs, large, hairy, and of a dusky green color; flowers stand in large tufts on the top of the branches, of a pale whitish-red color.

The root, which is the part used in medicine, consists of a number of slender fibres, matted together, and attached to one head, of a brown color, having a strong and unpleasant smell. Valeria has long been recommended by the most learned physicians as a medicine of great use in nervous disorders; and is particularly serviceable in hysteric cases, as well as in epilepsy, proceeding from a debility of the nervous system. According to Dr. Withering, it is an excellent medicine in cases of habitual costiveness. It should be given in doses from one to two tea-cupsful or more, in powder three times a day. It seems most useful when given in substance, and in large doses.

**VIOLET RATTLESNAKE**—Grows about four inches high, on the banks of rivers, and in pine woods: leaves grow in a cluster from a stalk, oval-shaped, fleshy, and full of small veins; flowers of a pale blue color.

An infusion of this plant, a handful to a quart of boiling water, taken in doses of a tea-cupful three or four times a day, and some of the green leaves bruised, and applied twice or thrice a day to scrofulous tumors, or king's evil, is said to be an infallible remedy.

**VIOLET, SWEET, *Viola Odorata***—Is cultivated in our gardens; leaves heart-shaped, notched, flowers deep purple, odoriferous.

A tea-spoonful of the powdered herb is celebrated as a mild laxative. To children, a strong infusion or decoction formed into syrup with molasses, honey, or sugar, in doses of a wine-glassful, will be more acceptable.

**VIRGIN'S BOWER**—Grows about two feet high, near

ponds and low pastures; leaves opposite in pairs, and terminated by an odd one; the flowers somewhat resemble the appearance of feather tails.

A small handful of the leaves infused in a quart of boiling water, and given in doses of a gill three times a day, is said to be very beneficial in venereal sores, or cutaneous eruptions of long standing, particularly if the sores be washed with the same. The bruised green leaves have been applied to ulcers, as an escharotic, to destroy fungous or proud flesh.

**VIRGINIA, OR BLACK SNAKE ROOT, *Serpentaria Virginiana***—Grows in rich woodlands, from seven to nine inches high, leaves heart-shaped, flowers of purplish brown color. The root is composed of a number of strings, or fibres, issuing from one head, and matted together, of a brownish color on the outside, and pale or yellowish within.

It has an aromatic smell, and a warm, bitterish, pungent taste. It promotes perspiration, raises the pulse, and resists putrefaction. Hence it is especially adapted to the low and advanced stage of typhus or nervous fever. It may be given in the form of infusion or tea, a handful to a quart of boiling water, in doses of a tea-cupful; or in powder, from ten to thirty grains, every two or three hours. Conjoined with the Peruvian bark, or any of its substitutes, it is an admirable remedy in obstinate cases of the ague and fever, and other disorders of general weakness. In cold phlegmatic habits, it has also been exhibited in the form of tincture, and when united with double the quantity of dogwood bark, or berries, it affords a good bitter. Professor Barton observes, that a strong decoction of the root was used with great benefit as a gargle in a putrid sore-throat, which prevailed in New Jersey.

In that species of pleurisy, which is properly enough designated by the epithet bilious, Professor Chapman states, he has repeatedly had occasion to recur to the serpentaria, and always with more or less utility. The bilious pleurisy he considers as having all the characteristics of pneumonic inflammation, with the addition of some of the symptoms incident to autumnal fever, such as head-ache, great gastric distress, and almost always violent vomitings of bile. It differs, also, from ordinary pleurisy, in having less activity of inflammation, and consequently in not bearing the same extent of depletion. The system, indeed, will often be very evidently depressed by one or two bleedings. In this case, the practice which has been commonly pursued is, after the removal of a comparatively small portion of blood, and the thorough evacuation of the alimentary canal, to administer very freely draughts of the infusion of the serpentaria in order to excite perspiration.

Externally applied, the decoction has been found to cure the itch.

WAKE ROBIN. See *Cuckow Pint*.

WALNUT, WHITE, *Juglans Alba*—Affords one of the finest cathartic medicines in the whole American Materia Medica. The inner bark, boiled for several hours, then strained and reboiled to the consistence of thick honey, forms the best preparation of this invaluable medicine. A common-sized pill or two, at going to bed, is admirable to remove those costive habits, which occasion head-aches, loaded stomachs, colics, &c. And, in increased doses, say double quantities, it will be found a sovereign medicine in dysentery, bilious fever, and all other complaints requiring aperient medicines, more especially if combined with equal quantities of calomel. I cannot quit this extract without most heartily recommending it to every American family to keep it constantly by them.

The bark of the root is excellent to raise a blister, therefore may be substituted for Spanish flies.

WATER CRESSES—Grows in running brooks and wet ditches.

The green herb, eaten as a vegetable, and the expressed juice in doses of a table-spoonful two or three times a day, is an effectual remedy for the scurvy.

WATER TREFOIL. See *Trefoil, Water*.

WHITE BRYONY—Grows in low meadows and swamps; the stems twist about bushes, and shoot out to a great extent; the leaves pointed, irregularly toothed, very large, diminishing gradually to the top; flowers of a yellow green, which produce a red berry; the root is white and large.

A very strong decoction of the root strained, and then simmered slowly by the fire, until it becomes of the consistence of honey, is said to be a good purgative medicine in doses from one to three tea-spoonful.

WHITE WOOD. See *Poplar*.

WILLOW, *Salix*—Professor Barton thinks that our willows possess nearly the same virtues that have been ascribed to those of Europe, and that they might be substituted for the Peruvian bark. The bark of the white willow, smooth willow, and crack willow, so called from the remarkable brittleness of its branches, collected when it abounds with sap, has been successfully employed in intermittent or ague and fever, in doses of one or two drachms. The broad-leaved willow is said to possess greater virtues than either of the above. This species may be distinguished by the shape of its leaves from all others except the bay-leaved willow. The leaves of the latter are smooth and shining, of a deeper green, and have not the downy appearance on the under sur-



face, which is so remarkable in this. It is found in woods and hedges, on hilly situations, and delights in cold clayey moist grounds.

A strong decoction of this bark resembles port wine in color. It is astringent to the taste and somewhat bitter. According to Dr. Wilkinson, it is a remedy of great efficacy in most cases where the Peruvian bark is indicated. He directs one ounce and a half (a handful) of the bark to be infused in one quart of water for six hours, then boil it over a gentle fire for a quarter of an hour, and strain for use. Of this the ordinary dose is a wine-glassful three or four times a day. But in ague and fever, the dose may be repeated every third hour in the interval of the fit.

WINTERBERRY. See *Alder, Black*.

WINTERGREEN. See *Calico Tree*.

WOOD BETONY—Grows about a foot high in upland woods and old pastures; the stem square and hairy; the leaves opposite and hairy; the flowers in spikes, of a purple color.

An infusion of the herb, a handful to a quart of boiling water, in doses of a tea-cupful every two hours, is said to be serviceable in rheumatic or gouty affections.

WORMSEED. See *Jerusalem Oak*.

WORMWOOD. See *Mugwort*.

YARROW—Grows in dry pastures and along the sides of fences, about a foot high; leaves pointed; flowers white, tinged with a little purple beneath.

A handful of the tops of yarrow, infused in a quart of boiling water, in doses of a tea-cupful three or four times a day, is reputed to be a valuable medicine in the dysentery, bleeding piles, and restraining immoderate flow of the menses. A table-spoonful of the expressed juice taken twice a day, and the herb bruised, or in the form of a poultice, is said to have cured a cancer of the breast. The green leaves pounded, and applied over a bruise, dissipates it in a few days.



## DIRECTIONS

*Respecting the Collection and Preservation of Vegetable Substances.*

Herbs and leaves are to be gathered in dry weather, after the dew is off them, and are to be freed from decayed, withered, or foreign leaves. They are usually tied in bundles, and hung up in a shady, warm, and airy place, or spread upon the floor, and frequently turned. If very juicy, they are laid upon a sieve and dried by a gentle degree of artificial warmth. They should be dried in such quantities at a time that the process may be finished as quickly as possible; for by these means their powers are best preserved; the test of which is, the perfect preservation of their natural color.

Flowers ought also to be collected in clear dry weather, after the dew is off, immediately after they had opened. They should also be dried nearly as leaves, but more quickly, and with more attention. As they must not be exposed to the sun, it is best done by a slight degree of artificial warmth.

Barks and woods should be collected when the most active part of the vegetables are concentrated in them, which happens in spring and in autumn. Spring is preferred for resinous barks, and autumn for those that are gummy. Barks should be taken from young trees, and freed from decayed parts, and all impurities.

Seeds and fruits are to be gathered when ripe, but before they fall spontaneously.

Roots which are annual, should be collected before they shoot out their stalks or flowers. Those which are worm-eaten or decayed, are to be rejected. The others are immediately to be cleaned with a brush and cold water, letting them lie in it as short a time as possible; and the fibres and little roots, when not essential, are to be cut away. Roots which consist principally of fibres, and have but a small top, may be immediately dried. If they are juicy, and not aromatic, this may be done by a moderate heat; but if aromatic, by simply exposing them, and frequently turning them in a current of cold dry air. If very thick and strong, they are to be split or cut into slices, and strung upon threads; if covered with a tough bark, they may be peeled fresh, and then dried. Such as lose their virtues by drying, or are directed to be preserved in a fresh state, are to be kept buried in dry sand.

The proper drying of vegetable substances is of the greatest importance. It is often directed to be done in the shade and slowly, that the volatile and active particles may not be dissipated by too great heat; but this is an error, for they always lose infinitely more by slow than by quick drying.—When on account of the color, they cannot be exposed to the sun, and the warmth of the atmosphere is insufficient, they should be dried by an artificial warmth less than 100 degrees of Fahrenheit, and well exposed to a current of air. When perfectly dry and friable, they have little smell; but after being kept some time, they attract moisture from the air, and regain their proper odor.

# DISPENSATORY.

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The following tables of medicine will be found sufficient to answer every purpose of practice, and the expense will be found nothing, compared to the great advantages which must result from being constantly supplied with them. To render the work still more complete, I have, in these tables, annexed to the medicines their doses, according to the age of the patient; observing, however, that whatever general rule may be given, it can only be applied with reference to the habit and state of the patient. The judgment of the person who administers the medicine must, therefore, be exercised in this respect. It will be found that the constitution is often attended with certain peculiarities, both in relation to medicine in general, and also to certain substances, particularly, which knowledge is only to be obtained by experience.

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## EXPLANATION OF WEIGHTS AND MEASURES.

20 grains make	-	-	-	-	-	-	1 scruple,
3 scruples	-	-	-	-	-	-	1 drachm,
8 drachms	-	-	-	-	-	-	1 ounce,
12 ounces	-	-	-	-	-	-	1 pound.

A teaspoonful is equal to 60 drops or 1 drachm.

A tablespoonful is the measure of one half ounce.

A large wineglassful is equal to 2 ounces.

# A TABLE OF MEDICINES FOR FAMILY USE, WITH THEIR DOSES AND QUALITIES ANNEXED,

[THESE DOSES MUST BE INCREASED OR DIMINISHED, ACCORDING TO THE STRENGTH AND HABIT OF THE PATIENT.]

MEDICINES.	ADULT.	FROM 15 TO 10.	FROM 10 TO 6.	FROM 6 TO 4.	FROM 4 TO 2.	FROM 2 TO 1.	UNDER ONE,"	QUALITIES.
Arsenic, solution of.	5 to 12 dps	4 to 8 dps	3 to 6 dps	2 to 5 dps	1 to 4 dps	$\frac{1}{2}$ to 3 dps	$\frac{1}{2}$ to 2 dps	Tonic.
Antimonial wine...	3 to 4 dps	$2\frac{1}{2}$ to 3 dps	2 to $2\frac{1}{2}$ dps	$\frac{1}{2}$ to $2\frac{1}{2}$ dps	1 to 2 drs	1 to $1\frac{1}{2}$ dps	$\frac{1}{2}$ to 1 dr	Emetic.
—as a diaphoretic..	26 to 60 dps	15 to 40 dps	12 to 30 dps	10 to 20 dps	8 to 15 dps	6 to 10 dps	4 to 6 dps	Diaphoretic.
Alum.....	5 to 15 grs	3 to 10 grs	2 to 7 grs	$1\frac{1}{2}$ to 5 grs	1 to 3 grs	.....	.....	Astringent.
Aloes.....	5 to 20 grs	$3\frac{1}{2}$ to 15 grs	3 to 12 grs	2 to 10 grs	$1\frac{1}{2}$ to 8 grs	.....	.....	Cathartic.
Arrow root.....	.....	.....	.....	.....	.....	.....	.....	Nutritious food.
Balsam copavi.....	20 to 80 dps	15 to 40 dps	12 to 30 dps	10 to 20 dps	8 to 15 dps	5 to 10 dps	.....	Corroborant.
Balsam, Turling on.	do do	do do	do do	do do	do do	do do	do do	Corroborant.
Barley.....	.....	.....	.....	.....	.....	.....	.....	Nutritive.
Bitters.....	2 to 4 drs.	1 to 2 drs	.....	.....	.....	.....	.....	Stomachic.
Borax.....	.....	.....	.....	.....	.....	.....	.....	Deterg. externally.
Bark, Peruvian.....	30 grs to 2 dts	$25$ to $1\frac{1}{2}$ dts	20 to 1 dr	15 to 40 grs	12 to 30 grs	10 to 25 grs	6 to 16 grs	Tonic & antiseptic.
Calomel.....	10 to 30 grs	8 to 20 grs	6 to 15 grs	5 to 12 grs	4 to 10 grs	3 to 8 grs	1 to 5 grs	Active purgative.
Camphor.....	4 to 20 grs	2 to 10 grs	2 to 6 grs	2 to 4 grs	1 to 3 grs	1 to 2 grs	$\frac{1}{2}$ to 1 gr	Stimulant.
Cream of Tartar..	4 to 12 dts	3 to 8 dts	2 to 5 dts	2 to 4 dts	1 to 3 dts	10 to 20 dps	.....	Cooling aperient.
Caustic vol. alk. liq.	$\frac{1}{2}$ to 2 dts	$\frac{1}{2}$ to 1 dr	25 to 50 dps	20 to 40 dps	15 to 30 dps	.....	.....	Stimulant.
Corrosive sublimate.	.....	.....	.....	.....	.....	.....	.....	Anti-venereal.
Columbo.....	10 to 60 grs	8 to 40 grs	7 to 35 grs	6 to 25 grs	5 to 20 grs	4 to 15 grs	2 to 10 grs	Stomachic & tonic.
Chalk, prepared,...	25 to 50 grs	16 to 40 grs	15 to 35 grs	12 to 30 grs	10 to 25 grs	7 to 20 grs	5 to 12 grs	Absorbent.
Camomile flowers..	.....	.....	.....	.....	.....	.....	.....	Stom. & aniseep.
Castile soap.....	1 to 4 dps	20 to 50 grs	15 to 40 grs	12 to 30 grs	10 to 25 grs	8 to 20 grs	5 to 10 grs	Attenuant & deter.
Croton oil.....	4 to 12 dts	$\frac{1}{2}$ to 2 dps	$\frac{1}{2}$ to 1 drp	$\frac{1}{4}$ to $\frac{3}{2}$ drp	1-6 to $\frac{1}{2}$ drp	$\frac{1}{2}$ to $\frac{1}{4}$ drp	$\frac{1}{2}$ to $\frac{1}{4}$ drp	Cathartic.
Castor oil.....	20 to 80 grs	3 to 8 dps	$2\frac{1}{2}$ to 6 dps	2 to 5 dps	$1\frac{1}{2}$ to 4 dts	1 to 3 dts	1 to 2 dts	Purgative.
Essence peppermint.	10 to 50 dps	8 to 30 dps	6 to 20 dps	4 to 15 dps	3 to 12 dps	2 to 10 dps	1 to 6 dps	Carminalive.
Elixir vitriol.....	15 to 40 dps	10 to 30 dps	8 to 20 dps	6 to 15 dps	4 to 10 dps	2 to 6 dps	1 to 4 dps	Tonic.



[illegible]

MEDICINES.	ADULT.	FROM 10 TO 6.	FROM 10 TO 6.	FROM 6 TO 4.	FROM 4 TO 2.	FROM 2 TO 1.	UNDER ONE.	QUALITIES.
Senna.....	30 dpts to 2 drs	20 dpts to 1 dr	15 to 50 dps	12 to 40 dps	10 to 30 dps	6 to 20 dps	2 to 10 dps	Purgative.
Spirits of lavender..	2 to 8 drs	1 to 4 drs	1 to 3 drs	1½ to 2 drs	20 grs to 1 dr	10 to 40 grs	5 to 20 grs	Cordial.
Sulphur, flour of...	.....	.....	.....	.....	.....	.....	.....	Apertient.
Tamarinds.....	2 to 6 grs	2 to 4 grs	1½ to 3 grs	1 to 2 grs	½ to 1 gr	½ to 1 gr	¼ to 1 gr	Cooling laxative.
Tartar emetic.....	.....	.....	.....	.....	.....	.....	.....	Emetic.
Turner's cerate.....	.....	.....	.....	.....	.....	.....	.....	Healing.
Tincture of steel...	8 to 18 dps	5 to 12 dps	4 to 10 dps	3 to 8 dps	2 to 6 dps	1 to 5 dps	2 to 3 dps	Tonic.
— rheumatic	½ to 1 oz	2 to 4 drs	1 to 3 drs	½ to 2 drs	20 to 60 dps	.....	.....	Anti-rheumatic.
— bark.....	2 to 6 drs	1½ to 4 drs	1 to 3½ drs	1 to 3 drs	3¼ to 2 drs	½ to 1½ drs	20 to 40 dps	Tonic.
— rhubarb.....	4 drs to 2 ozs	3 to 8 drs	2 to 6 dms	2 to 5 drs	1½ to 3 drs	1 to 2 drs	20 to 40 dps	Mild cathar. & stom.
— fox-glove.....	10 to 60 dps	8 to 40 dps	6 to 30 dps	5 to 20 dps	4 to 15 dps	2 to 12 dps	1 to 8 dps	Diuretic.
— cantharides	10 to 50 dps	10 to 40 dps	8 to 30 dps	6 to 20 dps	4 to 15 dps	2 to 5 dps	1 to 5 dps	Stimulant.
— columbo.....	1 to 4 drs	1 to 3 drs	40 dps to 2½ dr	30 dps to 2 drs	20 dps to 1½ dr	15 dps to 1 dr	10 to 40 dps	Tonic.
— myrrh.....	.....	.....	.....	.....	.....	.....	.....	Detergent.
iritiol, white.....	20 to 60 grs	14 to 30 grs	6 to 15 grs	4 to 10 grs	2 to 5 grs	1 to 3 drs	.....	Emetic.
— as a tonic.....	2 to 5 grs	1 to 3½ grs	½ to 2 grs	¼ to 1 gr	.....	.....	.....	Tonic.
— blue.....	.....	.....	.....	.....	.....	.....	.....	Escharotic.
virginia snake root.	10 to 20 dps	8 to 15 grs	6 to 10 grs	3 to 6 grs	1 to 4 grs	1 to 3 grs	.....	Stimulant & stom.

# A TABLE OF MEDICINAL COMPOSITIONS, WITH THEIR DOSES AND PROPERTIES.

COMPOSITIONS.	ADULT.	FROM 15 TO 10.	FROM 10 TO 6.	FROM 6 TO 4.	FROM 4 TO 2.	FROM 2 TO 1.	UNDER ONE.	PROPERTIES.
Antimonial powders.	8 to 15 grs	7 to 12 grs	6 to 8 grs	4 to 6 grs	3 to 5 grs	2 to 4 grs	1 to 3 grs	Diaphoretic.
Anti-solu. or mix...	3 to 6 drs	2 to 4 drs	1 to 3 drs	1 to 2 drs	1 to 2 drs	1 to 1 dr	1 to 1 dr	Diaphoretic.
Anodyne sudor. dps.	60 to 100 dps	50 to 80 dps	40 to 70 dps	30 to 60 dps	20 to 50 dps	10 to 30 dps	5 to 20 dps	Anodyne & sudor.
Absorbent mixture.	4 to 8 drs	3 to 5 drs	3 to 4 drs	2 to 3 drs	1 to 2 drs	1 to 2 drs	1 to 2 drs	Absorbent.
Absor. & aper. mix.	.....	.....	.....	3 to 4 drs	2 to 4 drs	1 to 3 drs	1 to 2 drs	Absorb. & aperient
Anti-dysenteric mix.	6 to 12 drs	5 to 8 drs	4 to 6 drs	3 to 5 drs	2 to 4 drs	2 to 3 drs	1 to 2 drs	Anti-dysenteric.
Astringent mixture.	5 to 8 drs	3 to 6 drs	2 to 5 drs	2 to 3 drs	1 to 2 drs	1 to 2 drs	1 to 1 dr	Astringent.
Cathartic mixture.	6 to 12 drs	5 to 8 drs	4 to 6 drs	3 to 5 drs	2 to 4 drs	2 to 3 drs	1 to 2 drs	Cooling cathartic.
Camphor powders.	10 to 15 grs	8 to 12 grs	6 to 10 grs	5 to 8 grs	4 to 6 grs	3 to 5 drs	2 to 4 grs	Sim. & diaphoretic
Camp. julep or mix..	6 to 8 drs	4 to 6 drs	3 to 4 drs	2 to 5 drs	1 to 3 drs	1 to 2 drs	1 to 1 dr	Simulant.
Decoc. or infus. bark	2 to 6 ozs	1 to 4 ozs	1 to 3 ozs	1 to 5 drs	1 to 2 ozs	6 to 12 drs	4 to 8 drs	Tonic.
Decoc. of seneca...	6 to 12 drs	5 to 8 drs	4 to 6 drs	3 to 5 drs	2 to 4 drs	2 to 4 drs	1 to 3 drs	Diaphoretic.
Diaphoretic drops...	1 to 3 drs	1 to 1 dr	1 to 1 dr	20 to 40 dps	15 to 30 dps	10 to 20 dps	5 to 10 dps	Diaphoretic.
Diuretic mixture...	2 to 4 ozs	2 to 3 ozs	1 to 2 ozs	1 to 2 ozs	1 to 1 oz	1 to 1 oz	1 to 4 drs	Diuretic.
Dover's powder....	10 to 20 grs	6 to 12 grs	5 to 10 grs	4 to 8 grs	3 to 6 grs	2 to 4 grs	1 to 1 gr	Diaphoretic.
Febrifuge powders.	8 to 15 grs	7 to 10 grs	6 to 8 grs	4 to 6 grs	3 to 5 grs	2 to 4 grs	1 to 3 grs	Febrifuge.
Febrifuge mixture..	6 to 12 drs	5 to 8 drs	4 to 8 grs	4 to 6 drs	3 to 5 drs	2 to 4 grs	1 to 4 drs	Febrifuge.
Infusion of Columbo	1 to 3 ozs	1 to 2 ozs	1 to 2 ozs	1 to 2 ozs	1 to 1 oz	2 to 6 grs	1 to 4 drs	Tonic.
Lime water.....	1 to 4 ozs	1 to 3 ozs	1 to 2 ozs	1 to 2 ozs	1 to 1 oz	2 to 6 grs	1 to 2 drs	Absorb. and tonic.
Pectoral mixture...	4 to 8 drs	3 to 6 drs	2 to 5 drs	2 to 4 drs	1 to 3 drs	1 to 2 drs	1 to 1 dr	Obtunding.
Purgative electuary	2 to 4 drs	1 to 3 drs	1 to 2 drs	1 to 1 dr	1 to 1 dr	1 to 1 dr	.....	Purgative.
Saline mixture.....	6 to 8 drs	4 to 7 drs	4 to 6 drs	3 to 5 drs	3 to 4 drs	2 to 3 drs	1 to 2 drs	Diaphoretic.

COMPOSITIONS.	ADULT.	FROM 15 TO 10.	FROM 10 TO 6.	FROM 6 TO 4.	FROM 4 TO 2.	FROM 2 TO 1.	UNDER ONE.	PROPERTIES.
Spirit of minderus..	6 to 8 drs	4 to 7 drs	4 to 6 drs	3 to 5 drs	3 to 4 drs	2 to 3 drs	1 to 2 drs	Diaphoretic.
Syrup of flax seed..	6 to 8 drs	4 to 7 drs	4 to 6 drs	3 to 5 drs	3 to 4 drs	2 to 3 drs	1 to 2 drs	Pec. & obtunding.
Solu. sul. quinine..	1 to 2 drs	$\frac{1}{2}$ to 2 drs	$\frac{1}{2}$ to 1 dr	20 to 40 dps	15 to 30 dps	10 to 20 dps	5 to 10 dps	Tonic.
Tonic powders.....	15 to 50 grs	10 to 30 grs	8 to 25 grs	6 to 20 grs	4 to 12 grs	1 to 6 grs	1 to 3 grs	Tonic.
Vitriolic solution...	4 to 6 drs	2 to 4 grs	2 to 3 drs	1 $\frac{1}{2}$ to 2 $\frac{1}{2}$ drs	1 to 2 drs	1 to 2 drs	$\frac{1}{2}$ to 1 dr	Astringent.

### SAPPINGTON'S PILLS.

R. Sulphate of quinine.....40 grains.  
 Gum myrrh.....10 "  
 Liquorice.....30 "  
 Make 40 pills.



## EMETICS.

Are medicines which excite vomiting, and are usually employed in fevers of almost every species, especially when accompanied in the commencement with nausea, vomiting, and other symptoms indicating a disordered state of the stomach. They cleanse the stomach of its noxious contents, and prepare the way for the reception of other remedies.

As a general rule, emetics should always be given on an empty stomach, and in the morning. They act with greater certainty, and with less distress to the patient. They will, however, answer very well in the evening. In ordinary cases, administer the medicine in divided quantities, so as to guard against too violent an effect, and encourage its operation by drinking freely of warm water.

To check inordinary vomiting from too large a dose of emetic medicine, give laudanum, combined with some cordial, apply fomentations to the pit of the stomach, and sinapisms to the extremities. Chicken water, copiously drank, is sometimes useful by turning the action downwards. When these fail, anodyne injections may be resorted to, and a large blister should be put on over the region of the stomach.

Of the emetics, the mildest are ipecacuanha, the antimonial solution, and antimonial wine, in broken doses. The most active and expeditious are the white and blue vitriol. Where poisons have been swallowed, one or other of these should be given in very large doses, and repeated every fifteen minutes until the desired effect be obtained. (*See Thorn Apple, and Poisons.*)

*Antimonial Solution.*—Take of tartar emetic six grains, water half a pint, spirits of lavender thirty drops, sugar one lump—mix. Dose for adults a wine-glassful every fifteen minutes, which should be encouraged by drinking freely of warm water, and afterwards turned downwards by taking a bowl of thin gruel made very salt.

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CATHARTICS.

Are medicines which, by quickening the peristaltic motion, increase the evacuations of the intestines, or as may happen, induce purging. Cathartics differ very materially in their degree of activity; some operating mildly, while others are more

violent in their effects. The former is usually distinguished by the title of *laxatives*, and the latter by that of *purgatives*, the harshest of which are called *drastic* purgatives.

The primary and most obvious effect of cathartics, is the evacuation of the bowels. These are liable to various accumulations of a morbid nature, which, remaining, disturb health, and frequently excite or confirm disease. Cathartics in relieving the bowels, under such circumstances, extend also their operation upwards, and bring down, in many instances, the contents of the stomach. To this may be added, that the strong impression which they impart to the liver and pancreas, excites these glands to invigorated efforts, and the result is a vast increase of their respective secretions. It is in this way, that congestions are removed, biliary calculi dislodged, and jaundice and other affections, from organic obstruction, cured. They also subdue the palsy, equalize excitement, and render important service in the management of the febrile and inflammatory cases. Exhibited in the commencement of almost any febrile affection, they will often arrest its progress, and, during the subsequent or more advanced periods, they are sometimes daily repeated, and, so far from weakening, add to the strength of the patient.

As in the case of emetics, give the medicine on an empty stomach, and either in the morning or at bed-time. By doing this, we prevent its being rejected, and secure a much more easy and effectual operation. And it should be recollected, as cathartics are of very different properties and modes of operation, they should carefully be selected according to the circumstances of the case.

*Laxatives.*—Of this description are castor oil, sweet oil, magnesia, calomel, neutral salts, sulphur, cream of tartar; as also the cathartic mixture, and the aperient and diaphoretic pills, in broken doses.

*Cathartic Mixture.*—Take of Glauber salts one ounce and a half; lemon juice or sharp vinegar, one ounce; water, half a pint; sugar, a sufficient quantity to sweeten it.—Mix.

Or, take of cream of tartar finely powdered, and manna, each one ounce; water, half a pint; sugar, a sufficient quantity to sweeten it—Mix. Dose for adults, a wine-glassful every hour till it operates.

*Anti-bilious, or Aperient and Diaphoretic Pills.*—Take of calomel, jalap, each twenty grains; tartar emetic, two grains; syrup or mucilage of gum Arabic, sufficient to form a mass; make eight pills. Dose for adults, two at bed-time, and the dose repeated every hour in the morning until it operates sufficiently. Or take four in the morning, and one every hour until the desired effect be obtained.

*Purgatives.*—The drastics are the croton oil, gamboge, aloes,

calomel, jalap, rhubarb, and senna, the purgative infusion, purgative powder, stimulant purgative pills, and purgative electuary. The distinction, however, between laxatives and purgatives, is by no means easy, since by diminishing or increasing the dose of the former, they may, with some propriety, be considered as belonging to the first or second class.

*Croton Oil.*—This oil is obtained from the seeds of the *Croton Tiglium*; a native of the East Indies. It is one of the greatest and most powerful cathartics, with which we are acquainted. Like all other active cathartics, it some times gripes the bowels. This effect may be relieved by drinking freely of chicken water, gruel, or flaxseed tea; or, if necessary, by a little laudanum. The usual dose, for an adult, is one drop, but four or five are sometimes given, it may be given in syrup, or made into the form of a pill with crumbs of bread—the latter form is preferable.

*Purgative Infusion.*—Take of senna and manna, each, half an ounce; salts, one ounce; ginger, one drachm; boiling water, one pint. Dose for adults, one gill every hour or two, until it operates.

*Purgative Powder.*—Take of calomel and jalap, each, twenty grains, to be taken in the morning in syrup or molasses, by adults.

*Or*, take of rhubarb and vitriolated tartar in fine powder, each one drachm; mix well together, and divide into four powders. One taken going to bed, and another in the morning, will be found an efficacious remedy, whenever it is required to cleanse the stomach and bowels of bilious and other offensive matter.

*Stimulant Purgative Pills.*—Take of calomel and gamboge each one drachm; syrup sufficient to form a mass. Beat them together, and then make twenty-four pills. Dose for adults, from three to six.

*Or*, take of calomel, aloes, rhubarb, and soap, each, one drachm, syrup or mucilage of gum Arabic, sufficient to form a mass. Beat them well together, and make forty-eight pills. Dose for adults, from four to eight.

*Or*, take of calomel and jalap, each, one drachm; powdered ginger and soap, each, half a drachm; mucilage or syrup sufficient to form a mass—divide into thirty pills. Dose for adults, from four to eight.

*Aloetic Pills.*—Take of Socotorine aloes, in the finest powder, one drachm and a half; Castile soap, one drachm; ginger, half a drachm. Beat them well together, and then add mucilage or syrup sufficient to form a mass—which is to be made into forty-eight pills. Dose for adults, two at bed-time, or a sufficient number to keep the bowels in a regular state.

*Purgative Electuary.*—Take of jalap, one drachm; cream

of tartar, one ounce; syrup or molasses as much as will give the whole a proper consistence. Dose for adults, from one to two tea-spoonsful in the morning, to keep the bowels in a soluble state.

## DIAPHORETICS.

In the common language of the schools, the term *diaphoretic*, is restricted to those articles only which promote the insensible perspiration; and such as occasion sweating, are distinguished by the appellation of *sudorifics*. But, as in the medicines arranged under these titles we can discern no difference, except in the degree of force, or what arises from the manner of administration, we shall comprehend the whole under the head of diaphoretics.

To promote perspiration, it is essentially necessary that the patient should be confined to his bed. Let his pulse, and the temperature of the body, be carefully watched. It is a principle settled and fully recognised, never to resort to diaphoretics in fevers of an inflammatory species, till arterial action and general excitement are considerably reduced by previous venesection and evacuations by puking or purging. After this direct depletion, diaphoretics then come in with great advantage, and will commonly either mitigate or completely arrest the progress of the disease.

In the exhibition of diaphoretics give diluent drinks, unless the stomach be irritable. This remark particularly applies to the antimonial preparations, and some of the combinations of ipecacuanha. The temperature of the drinks must be regulated by that of the skin. The latter not being high, they should be warm, or even hot; but if the contrary prevail, they must be given cold.

In the low stages of disease, while pursuing the diaphoretic plan, studiously avoid purging, unless circumstances imperiously require this remedy. It is very apt, in this state of the system, to check sweating, and to bring on an aggravation of the complaint. It does this by diverting action from the surface of the intestines, and by exposing the patient to cold.

*Diaphoretic Drops.*—Take of sweet spirits of nitre and antimonial wine, each, one ounce—mix. Dose for adults, a tea-spoonful every two hours. If the stomach is in an irritable state, add only half the quantity of antimonial wine.

*Antimonial Wine.*—Dose for adults, twenty drops every hour or two, till the proper effect be produced.

*Saline Julep or Mixture.*—Take of lemon juice, one ounce;



volatile sal ammoniae, one drachm, or salt of tartar four scruples. After the effervescence, add syrup, two tea-spoonsful; simple cinnamon water, or tea, half an ounce, or spirits of lavender, thirty drops; spring water, six ounces—mix. Dose for adults, two table-spoonsful every three hours.

*Effervescing Draught.*—Take fifteen grains of salt of wormwood, or volatile sal ammoniae, dissolved in a table-spoonful of water, in one cup; in another, two large tea-spoonsful of very good vinegar, with one or two table-spoonsful of water sweetened; pour one to the other, and let the patient drink immediately while they effervesce. When made with fresh lime or lemon juice, this is an elegant, pleasant, and useful medicine in all fevers, and particularly effectual in removing nausea and vomiting; it may be repeated every two or three hours.

*Spirit of Mindererus.*—Take of volatile sal ammoniac, two drachms; lemon juice or vinegar, half a pint, or as much as may be sufficient to saturate the volatile alkali—mix. A dose to be taken every two hours.

*Antimonial Solution.*—Dose for adults, a table-spoonful every two hours as a diaphoretic. (*See Emetics.*)

*Antimonial Powders.*—Take of tartar emetic, three grains; nitre, two drachms. Mix, and divide into twelve doses. One dose to be taken every two or three hours by adults. In obstinate cases, the addition of ten or twelve grains of calomel to the above recipe, will render the medicine more salutary.

*Febrifuge Powders.*—Take of ipecacuanha, two scruples; nitre, two drachms. Mix, and divide into twelve doses. One dose to be taken every two or three hours by adults.

*Febrifuge Mixture.*—Take of nitre, two drachms; lemon juice or vinegar, one ounce; water, half a pint; sugar a sufficient quantity to sweeten it—mix. A wine-glassful to be taken by adults every two hours. It will be rendered more active by the addition of two drachms of antimonial wine.

*Dover's Powder.*—Ipecacuanha, powdered, and opium, each, one drachm; vitriolated tartar, in powder, one ounce. The greatest possible pains should be taken to grind the mass to a completely fine powder. Nitre may be substituted for the vitriolated tartar, when that is not at hand. This powder is the most efficacious sudorific we possess. It is an admirable remedy for quieting the bowels, when affected by the exhibition of mercury, or any other cause. Dose for adults from ten to twenty grains every three or four hours.

*Camphorated Powders.*—Take of camphor, two scruples; nitre, powdered, two drachms. Moisten the camphor with spirits, and after reducing it to a fine powder, add the nitre. Divide it into twelve doses. One to be taken every two or three hours by adults.

*Infusion of Virginia Snake Root.*—Snake root half an ounce; boiling water, half a pint; infuse for two hours in a covered vessel and strain. Dose: A table-spoonful occasionally, taken warm. It is used to aid other diaphoretics, and in its effects resembles camphor,

*Anodyne Sudorific Drops.*—Take of laudanum, half an ounce; antimonial wine, one ounce—mix. Dose for adults, two tea-spoonsful at bed-time.

*Anodyne Sudorific Bolus.*—Take of opium, one grain and a half; ipecacuanha, ten grains; syrup of mucilage, sufficient to form a bolus.

Or, take of opium, one grain and a half; tartar emetic one grain; or golden sulphur of antimony, two grains; mucilage sufficient to form a pill. To be taken by adults at bed-time.

For children, the best means of procuring a perspiration is the tepid bath, succeeded by the use of a table-spoonful of saline julep, or the diaphoretic drops, every two or three hours.

Besides the warm bath, the external stimulating diaphoretics are, friction, rebefacients, and blisters, which excite copious partial perspiration, previously to their vesication.

There are many vegetable substances which belong to this class of medicines, particularly the Virginia and Seneka snake roots, sarsaparilla, thoroughwort, &c. (*See Materia Medica.*)

## DEMULCENTS.

*Demulcent Drinks.*—Are those which sheath the acrimony of the humors, and render them mild, such as flax-seed tea, marsh-mallow tea, mucilage of quince seeds, pith of sassafras, slippery-elm, (*see Materia Medica.*) and gum Arabic. A solution of gum Arabic is made by boiling an ounce of picked gum Arabic, in a little more than a quart of water, until it be dissolved. All these are useful to sheath and defend very sensible parts from the irritation of acrid humors, as is the case in tickling cough, and common lax, or bloody flux, heat of urine, &c., in all which, the natural mucus of the parts is defective.

## ABSORBENTS.

*Absorbent Medicines.*—Are such as correct acidity in the stomach.

*Calcined Magnesia.*—One or two tea-spoonsful to be taken occasionally, mixed in milk or mucilage of gum Arabic, by adults.

*Prepared Chalk.*—A tea-spoonful to be given in the same manner as magnesia.

*Lime Water.*—A wine-glassful, with an equal quantity of new milk, to be taken occasionally by adults.

*Absorbent Mixture.*—Take of chalk prepared, half an ounce; gum Arabic, powdered, and white sugar, each two drachms; water, four ounces. Dose for adults, a table-spoonful every two or three hours.

*Absorbent and Aperient Mixtures.*—Is made by adding one drachm of rhubarb in powder, or half an ounce of the tincture of rhubarb, to the above recipe.

Or, take of prepared chalk and magnesia, each, half an ounce; sugar, two drachms; rub them well together, then add mucilage of gum Arabic, two ounces; weak cinnamon tea, four ounces. Mix. Dose for children, from one to two tea-spoonsful.

## DIURETICS

Are remedies to promote the urinary discharge, which may take place, either by stimulating the kindeys, or by an invigoration of the powers of absorption, and especially in cases of dropsical effusion. It hence appears, that diuretics are of two species, though in whichever mode they operate, it is by an action primarily on the stomach, extended to the absorbents or kidneys, according to the affinity of the article to one or the other of these parts.

*Mild Diuretics.*—Of this class of medicines, nitre, by reducing the force of circulation, will be found eminently useful in febrile cases. Dose, ten or fifteen grains for adults, every two or three hours. Conjoined with camphor, as in the camphorated powders, its diuretic effects, in some cases, is increased.

*Dulcified spirits of Nitre.*—Dose, for adults, half an ounce, every three or four hours. Unless this medicine be given

in large doses, it will excite perspiration, rather than act as a diuretic.

It is chiefly valuable in cases of children. There is, indeed, scarcely any medicine which, in their complaints, we can substitute in its place, and it may be given to them, in the same proportion even in the earliest periods of life.

*Cream of Tartar*.—Dose for adults, half an ounce, dissolved in a pint and a half of water, to be taken throughout the course of the day. It must be gradually increased, as the stomach becomes accustomed to it.

Of all the diuretic medicines, this is perhaps most fitted to those cases of dropsy which are accompanied with increased or febrile action of the pulse, though it here sometimes operates more effectually when combined with jalap, as in the form of laxative electuary. (*See Cathartics*.) Dose for adults two tea-spoonful every three or four hours, where we wish to evacuate large accumulations of fluid, and here an abstinence from drink must be enjoined.

*Salt of Tartar*—is considered, by some practitioners, a valuable diuretic, in doses of half a drachm, dissolved in water, three or four times a day. By combining it with the infusion of Columbo, or some of the bitter tonics, its efficacy is very much improved. Thus exhibited, it is said to increase the diuretic effect, while at the same time it invigorates the system generally.

*Parsley*.—The common parsley of our gardens is another valuable diuretic. A strong infusion of the roots in doses of a tea-cupful every two or three hours, is well adapted to relieve the ordinary suppression of urine. It is customary to unite with the parsley the seeds of the water melon.

*Diuretic Infusion*.—Pound a handful of the kernels of pumpkin seeds or melon seeds, with a small quantity of hard white sugar, to a smooth paste, then add a quart of boiling water, and a quarter of an ounce of saltpetre, or half an ounce of sweet spirits nitre, and rub them well together. This is a pleasant and mild diuretic, particularly useful where the discharge of urine is attended with heat and pain. A tea-cupful may be taken every hour or two by adults.

*Diuretic Pills*.—Take dried squills in fine powder and calomel, each, half a drachm; mucilage of gum Arabic, sufficient to form a mass, and then make twenty pills, two of which are to be taken at bed-time. These pills powerfully promote urine, and are very efficacious in carrying off cold, phlegmatic humor, in all dropsical swelling. When the squill alone is given, it may be taken in doses of two or three grains, three or four times a day, in the form of pills, by adults.

*Oil of Juniper*.—Dose for adults, ten drops in gruel.—(*See*



*Materia Medica.* See also, under this head, wild parsley, wild carrot, foxglove, and tobacco.)

*Stimulating Diuretics.*—The spanish fly promotes, as well as restrains, the urinary discharge. Exhibited in a state of excitement, or at any time, in small doses, it must commonly occasion strangury. But taken in reverse state of the system, or in large doses, it as constantly proves diuretic. Thus, in the weaker form of dropsy, two, three, or four drachms of the tincture, given in divided doses during the twenty-four hours, will produce the most copious evacuations of urine.

## EXPECTORANTS.

*Expectorants* have been defined those medicines which facilitate or promote the excretion of mucus or other fluids, from the pulmonary system or lungs.

Expectorants are employed when the mucus is too thin and acrid, when too viscid, or when the excretories are not sufficiently irritable to propel their contents. Where the mucus is thin and acrid, inflammation generally exists, and in such cases mucilaginous drinks, as flax-seed tea, mucilage of gum Arabic, or slippery elm, Iceland moss, or syrup, liquorice, antimonials, and nauseating medicines are employed. Oils differently prepared, and jellies, are also useful. Independently of inflammation, the mucus is sometimes too thin and acrid, from too great irritability of the vessels of the bronchial glands, and we then employ opiates and stimulating medicines, as mustard, horse-radish scneka, squills garlic, Indian turnip, meadow saffron, and tobacco. (*See Materia Medica.*) When the expectoration is too viscid, or the vessels not sufficiently irritable to assist the excretion, expectorants, strictly so called, are useful. These are the more stimulating medicines just mentioned; to which may be added all the variety of fetid gums, and the turpentine, including the balsams. Steams of warm water, impregnated with vinegar, aromatic herbs, and ether, are adapted to the same purpose.

*Nitric Lac Ammoniac.*—Pour very gradually two drachms of nitric acid, diluted in eight ounces of water, on two drachms of ammoniac, and triturate them in a glass mortar till the gum is dissolved, forming a milk fluid. Of this a table-spoonful may be taken every two or three hours in sweetened water. Laudanum, in some cases, may be usefully added.

*Pectoral Mixture.*—Gum ammoniac, two drachms; syrup of squills, half an ounce; laudanum, fifty drops; spring water,

six ounces. Reduce the gum to powder in a marble mortar, and gradually add the water, and triturate till the gum is dissolved, then strain from the impurities and add the other articles. Dose, a table-spoonful every two or three hours, for adults.

*Or*, take of sweet oil, one ounce; rain or soft water, half a pint; salt of tartar, five grains; white sugar, half an ounce. Dissolve the salt of tartar and the sugar in the water, and afterwards add the oil, when, by agitating the phial, a mixture will be formed of cream-like appearance. To this add paregoric elixir, half an ounce. Dose a table-spoonful every hour or two.

*Pectoral Emulsion.*—Take of oil of almonds, or pure sweet oil, one ounce; barley-water, six ounces; best white sugar and gum Arabic, powdered, of each half an ounce; laudanum, forty drops. Incorporate the sugar and gum Arabic together in a mortar with a small quantity of the barley-water, then gradually mix the oil, and afterwards add, by little at a time, the remainder of the water with the laudanum. One or two table-spoonsful of this emulsion may be taken frequently.

*Or*, take of the best purified honey and pure sweet oil, each, two ounces; fresh lemon juice, one ounce; syrup and paregoric, each, half an ounce. Mix, to form an emulsion. Dose, a tea-spoonful whenever the cough is most troublesome.

*Cough Mixture.*—Take of paregoric elixir, one ounce; powdered gum Arabic, one ounce; simple water, two ounces; sweet spirit of nitre, two drachms; antimonial wine, one drachm. Mix and dissolve. Dose, one table-spoonful to be taken whenever the cough is troublesome. But, in the first stage of catarrh, when inflammatory systems are present, this and all opiates, are improper.

*Or*, take of elixir paregoric, one ounce and a half; antimonial wine and syrup of squills, each one ounce; lac ammoniac, four ounces; syrup bal. tolu, one ounce. Dose, half a table-spoonful every two or three hours for adults.

*Or*, take of tincture of opium, one drachm, wine of ipecacuanha, half a drachm; oxymel of squills half an hour. Mix. Dose for adults, a tea-spoonful every two hours while the cough is severe.

*Domestic Remedies for Whooping Cough.*—Dissolve thirty grains of salt of tartar in a gill of water, add to it ten grains of cochineal finely powdered, sweeten this with fine sugar, and give an infant a tea-spoonful four times a-day. To a child of two or three years old, two tea-spoonsful; from four and upwards, a table-spoonful or more may be taken. The relief is said to be immediate, and in general within five or six days.

*Or*, take equal portions of new milk, and the lye strained

from hickory ashes, of which one table-spoonful may be given every hour through the day to a child of seven or eight years old.—This remedy is also strongly recommended.

*Pectoral Lozenges.*—Take of purified opium, two scruples; tincture of balsam of tolu, two drachms; syrup, composed of one part of water, and two parts of white sugar, four ounces; refined Spanish liquorice, previously moistened with a little warm water, so as to make it soft; gum Arabic, in fine powder, each, two ounces and a half; emetic tartar, eight grains. Rub the *opium* and the *emetic tartar* with the tincture and syrup until the former is perfectly dissolved, then add the liquorice, softened with warm water, and whilst beating them together, gradually sprinkled in the gum Arabic. Divide the mass into lozenges or *troches* each weighing ten grains, and exsiccate them gradually in the air. One may be put in the mouth and gradually dissolved, every hour or two when the cough is troublesome.

*Nitrous Lozenges.*—Take of purified nitre, two drachms; refined sugar, reduced to a fine powder, six drachms; pulverized gum tragactanth, three drachms.—Beat these together with a small portion of water, until they are intimately mixed, and form a coherent mass, which may be divided into moderate sized *troches* or lozenges, to be tried by means of a gentle heat. In cases of quinsy or sore throat, one of these lozenges frequently put in the mouth and suffered gradually to dissolve, will be found very beneficial.

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## ANODYNES.

Anodynes are medicines which ease pain and procure sleep.

*Opium.*—Of all the articles of the *Materia Medica*, this is, perhaps, the most extensively useful; there being scarcely one morbid affection, or disordered condition of the system, in which, under certain circumstances, it is not exhibited either alone or in combination. Opium, the product of the poppy, with some persons, leaves unpleasant effects; and with such, the lettuce opium (*see Materia Medica*) should be employed.

*Opiate Pills.*—Take of pure opium, and powder of cinnamon, or ginger, each, twelve grains; mucilage of syrup, sufficient to make them into twelve pills. Dose for adults, one or two at bed time.

*Anodyne Draught.*—Take of laudanum, a tea-spoonful; syrup, two tea-spoonsful; cinnamon, or herb tea, one ounce.



**Mix.** This to be taken at bed-time by an adult. When laudanum disagrees in the ordinary quantity, it may often be given with much advantage in doses of five or six drops every hour till the proper effect be produced; or it may be given in vinegar, whey, or conjoined with the antimonial wine, as in the form of the anodyne sudorific draught. (*See Diaphoretics.*)

As laudanum is extremely prejudicial to children, it ought not to be administered to them, except under peculiar circumstances. Instead of its internal use, a little of it should be rubbed on the backbone; or the same effects may be produced by rubbing on that part a tea-spoonful of anodyne balsam.

When laudanum is prescribed by way of injection, the proportion must be more than double what can be given by the mouth.

*Paregoric.*—Dose, for adults, one or two tea-spoonsful, in a cup of tea or gruel.

*Morphine.*—For this article, as well as for the quinine and most of the other improvements in pharmacy and chemistry, we are indebted to the skill and industry of the French chemists. It is an alkali obtained from opium, and is that principle in opium which quiets irritability and disposes to sleep, without producing these disagreeable effects, which sometimes arise, from any other preparation of that valuable medicine. Hence it is particularly valuable to those with whom opium generally disagrees. Morphine is used in medicine in combination with sulphuric, or acetic acid, forming the sulphate, or the acetate of morphine, of which the sulphate is to be prepared. They are used in solution, which may be obtained from any apothecary, and is thus prepared: Take of sulphate, or acetate of morphine, sixteen grains; water, one ounce; acetic acid, or strong vinegar, five to six drops; alcohol, one drachm. **Mix.**

The dose for an adult is from six to twenty-four drops of the solution, or one-fourth to one-half grain of the morphine itself, in pills or syrup.

## ANTI-SPASMODICS.

As the causes of spasms differ essentially, the remedies must equally differ. Bleeding, mercury, warm bathing, blister, opiates, camphor, volatile alkali, musk, castor, asafœtida, garlic, ether, wine, spirits, bark, steel, and other tonics, are the remedies usually resorted to.



In the choice of these, we employ the sedatives and fœtids to shorten the fits; and the stimulants and tonics to prevent tetanus.

*Gum Pills.*—Take asafœtida, three parts; gum ammonia, two parts; camphor, one part; beat them well together, and with as much syrup as is necessary, made into pills of the size of a common pea, from three to five may be taken at a dose, and repeated as often as shall be found necessary; not, however, exceeding three or four doses in a day. This is a powerful antispasmodic, and very useful in all nervous and hysterical complaints. When it is wished to render the mass purgative, which is generally proper, add as much socotrine aloes as of camphor.

### CORDIALS.

A glass of wine or a little brandy toddy.

*Compound Spirits of Lavender.*—Dose, for adults, a tea-spoonful on a lump of sugar, to be dissolved in the mouth, and gradually swallowed.

*Cordial Mixture.*—Take of aromatic spirits of hartshorn, two drachms; compound spirit of lavender, three drachms; cinnamon water, two ounces; spring water, three ounces. Mix. The dose for adults, a table-spoonful now and then.

*Cordial Draught.*—Take of volatile tincture of valerian, one drachm; simple syrup and water, of each four tea-spoonful. Mix. To be taken at once by adults.

*Cordial Drops.*—Take of paregoric elixir, volatile tincture of valerian, of each equal parts. Mix them well together. Dose, one tea-spoonful in a glass of water, for adults.

For children, the best cordial is white wine whey.

### STIMULANTS.

In relation to general stimulants, there is a distinction too important to be overlooked. We have a set distinguished by great diffusibility, and which, nearly as soon as exhibited, occasion universal excitement over the body; and there is a second section, by which tone is imparted, though very slowly, and by a long administration. The diffusible are very transient in their effects, while such as are more gradual in their operations, produce permanent or enduring impressions, and are called tonics.

As in the administration of stimulants, we hope to overcome an existing action, by exciting a new and stronger one, it is obvious that they can only be resorted to with any hope of advantage, in the feeble shapes of disease, or in more violent forms, reduced by previous evacuations. But, in determining the exact point at which to commence the use of stimulants, we may also be aided by watching their operation. Being ill-timed, they commonly produce pain in the head, or delirious wanderings, or morbid vigilance, or stricture of the breast, restlessness and anxiety, with a hot dry skin, parched tongue, and a quick, small, and corded pulse.

In the administration of stimuli, we should endeavor to graduate the article to the state of excitability.

This is a point of infinitely greater importance than is commonly imagined. It is not always the most active article produces the greatest effects. In the low states of disease, we have witnessed, in some instances, more effects from wine whey than strong toddy. This proceeds from the article being in unison with the condition of the system.

*Narcotics.*—That the purer narcotics are endowed with a stimulant power, is very satisfactorily proved by the operation of opium.

Exhibited in a moderate dose, the purer narcotics excite activity both of body and of mind. But to command their stimulant power, they ought to be given in small doses, frequently repeated, and gradually increased, and the excitement which they enkindle is thus sustained. But when the design is to mitigate the pain, or to procure sleep, or to relieve irritation, or deaden sensibility, they should be exhibited in a full dose, and at more distant intervals. It should be remembered that the indications, chiefly, which narcotics are capable of fulfilling, are to excite and support the actions of the system, to assuage pain, and allay irritation, to relieve spasmodic affections and to induce sleep, and to check the morbidly increased secretions and excretions.

*Volatile Sal Ammoniac.*—In a great variety of the febrile affections, this medicine has been prescribed, though it is in the low, or typhus fevers, that it is chiefly employed.

In one respect, the volatile alkali differs from every article of the class to which it is attached, and, it would seem, from all other medicines. The peculiarity to which we allude is this, that the excitement it raises approaches more nearly to that of healthy action, and hence it may be resorted to earlier than stimulants generally, in the inflammatory affections, and with greater safety in mixed cases, so equivocal or obscure, as to render uncertain the propriety of stimulation. It may be given in the shape of a pill or julep, in the dose of five or ten grains, every hour or two, according to circumstances.

The best form, however, is the latter, which may be made agreeably to the annexed prescription.

Take of volatile sal ammoniac, two scruples; gum Arabic, white sugar, each one drachm; oil of cinnamon, five drops; spring water, five ounces. Mix. Dose, for adults, a table-spoonful every two hours.

*Camphor*.—No medicine, perhaps, has been prescribed for a greater variety of purposes than camphor. In every modification of febrile action, when approaching to the typhoid state, camphor has been resorted to, and not without success. It excites perspiration, quiets nervous irritation, removes delirium, and abates the force of the disease. Camphor is best exhibited in the form of a julep or mixture.

*Camphorated Julep, or Mixture*.—Take of camphor, one drachm; gum Arabic, two drachms; white sugar, half an ounce; water, half a pint. Moisten the camphor with spirits, and after reducing it to powder, add the gum Arabic and sugar, and then, by degrees, pour on the water, while triturating them together in a mortar. Dose for adults, a table-spoonful every two or three hours.

Or, take camphor, one drachm; myrrh, half a drachm; white sugar, two drachms; spring water, six ounces. Dose, for adults, a table-spoonful. The mixture, thus made, is perfectly transparent and very palatable. Of late, however, the solution, or rather suspension of camphor in milk, has nearly superseded all other preparations of the medicine in practice. It is made by simple trituration. The dose of camphor is from five to ten grains, to be repeated once in two or four hours, according to circumstances.

*Pills of Camphor and Asafætida*.—Take of camphor, asa-fætida, each one drachm; moisten the camphor with a few drops of alcohol, unite them together, and make thirty-six pills. It is sometimes advisable to add half a drachm of calomel to the above.

This is an admirable combination, as well as camphor united with opium, for that species of mania, excited by frequent intoxication. Dose, for adults, two pills every three or four hours.

*Spirit of Turpentine*.—This is one of the most active and diffusible of stimulants. In the typhus or low fevers, when other diffusible stimuli are given, much may be expected from turpentine. It promptly relieves gout in the stomach, and is particularly suited to periodical colics, arising from flatulence. The dose of the spirit of turpentine, in those cases is about a drachm, to be repeated more or less frequently, according to the nature of the disease, and the best mode of giving it is alone, or with a small portion of water. By attempting to blend it with mucilage, or any such vehicle, it seems, in some



degree, to be volatilized, and is thereby rendered more pungent to the fauces, and difficult to swallow.

*Aromatics.*—Ginger, cinnamon, cloves, nutmegs, alspice, and all the aromatics are more or less stimulant.

*Wine.*—As a cordial and tonic, wine is often directed in various chronic cases, attended with debility, and also in the convalescence from acute diseases. Compared with ardent spirits, the action of wine is infinitely less injurious in a state of health, and as a remedy in disease, it evinces the same superiority. The effect it produces is slower and more permanent, combining also qualities which, while they blunt the ardency of the stimulants, afford no inconsiderable portion of nutriment, by which the system is sustained and invigorated. In exhibiting wine, we are cautiously to regulate its administration by the effects it manifests, since, urged too far, it might induce indirect debility, and thus cause irreparable mischief. Wine may always be considered as doing good, when it renders the pulse fuller, slower, and stronger; when it removes or lessens delirium, calms irritation, and composes to sleep. But if, on the contrary, it accelerates the pulse, flush the countenance, increase the temperature of the skin, excite thirst, aggravate delirium, or restlessness, and thus occasion an exacerbation of the disease, the evidence of its injurious tendency is no less decisive, and we should at once withdraw it altogether, or reduce the quantity.

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## ASTRINGENTS.

Astringent medicines are employed for checking hemorrhages, and immoderate evacuations of every kind.

*Infusion of Roses.*—Upon a large handful of dried red rose-leaves, pour a pint of boiling water; let them infuse half an hour.

*Infusion of Oak Bark.*—Upon a handful of white oak bark, shred fine, pour a quart of boiling water; let it stand one hour, then boil a few minutes.

*Infusion of Galls.*—Upon a quarter of an ounce of galls, pour a quart of boiling water; let them infuse one hour, then boil for a few minutes. A small quantity of cinnamon adds greatly to the flavor of this and the oak bark; and acidulating any of them, with the acid of vitriol, renders it more efficacious; they should be taken cold, to the quantity of half a gill, or a wine-glassful, every hour or two.

*Astringent Decoction.*—Take of cinnamon, three drachms;



Peruvian bark, one ounce ; spring water, three pints. Boil these together till only one half remains ; then strain off the liquor after it has cooled, and add elixir vitriol, one drachm. Dose, for adults, two ounces thrice a day.

*Astringent Mixture.*—Take of the infusion of gall, four ounces ; prepared chalk, two drachms ; laudanum, forty drops. Mix. Dose, for adults, a table-spoonful every three or four hours.

*Or*, take of tincture of kino and prepared chalk, each, half an ounce ; laudanum, forty drops ; boiling water, four ounces. Mix. Dose, for adults, a table-spoonful every two or three hours.

*Vitriolic Solution.*—Take of white vitriol, three drachms ; alum, two drachms ; spirit of lavender, half an ounce ; boiling water, one pint. Mix. Dose, for adults, a large table-spoonful every morning, on an empty stomach, without diluting it, and in some cases to be repeated every six hours.—When evacuations are required, the quantity of alum may be diminished, or even entirely omitted ; and when great stringency is required, the quantity of alum is to be increased, and the vitriol to be diminished.

*Pills of Sugar of Lead, &c.*—Take of sugar of lead and ipecacuanha, each, six grains ; opium, one grain ; syrup sufficient to form a mass. Divide in four parts ; one pill to be taken every three hours until the hemorrhage ceases.

*Anti-dysenteric Mixture.*—Take of lemon juice, or best vinegar, two ounces ; common salt, as much as the acid will dissolve ; strong mint tea, half a pint ; white sugar, sufficient to sweeten it. Mix. Dose, for adults, a wine-glassful every two or four hours.

## TONICS.

Tonic medicines are those which increase the tone or strength of the body. In the widest acceptation of the term, this class of remedies is extremely extensive, since it includes every means which invigorates the powers of life. Among the means to overcome debility, or to invigorate the system, is properly regulated diet. The diet should always be accommodated to the state of the system ; and whatever may be the nature of the case, the patient should eat much more frequently than the common meals. The stomach has been pronounced, by a very sagacious observer, to be in one respect like a school-boy, who is always doing mischief when not employed.

After recovery from acute diseases, it should at first consist of the lightest vegetable matter, and especially the farinaceous articles, such as rice, tapioca, arrow root and sago. To these may succeed eggs, oysters, game, and white poultry; and, finally, ham, beef, and mutton. As a general rule, solid food is preferable to fluids. It is usually more comfortable to the stomach, and restores strength with greater rapidity. In selecting the articles of diet, the palate of the person himself should be consulted, since the pleasure which is received in eating, is of itself no ordinary stimulus, and particularly to a very debilitated system.

Next to diet, in point of efficacy as a tonic, are the warm and cold baths. Though different in temperature, they produce effects not very dissimilar. Each, when judiciously managed, will very rapidly, in many instances, invigorate the body.—(*See that head.*)

As a tonic, exercise is undoubtedly among the most decisively useful, and has been divided into two parts, *active* and *passive*. It is proper, in extreme debility, or in the first stage of convalescence from an acute disease, to begin with the second species. This consists chiefly of frictions, which may be made with a naked hand, or with a brush, either alone, or with the addition of some stimulating matter. To rub at least once a day for half an hour or more, the whole body with fine dry salt, creates an universal glow, renders the skin smooth and florid, imparts vigor to the muscles, improves appetite and the powers of digestion, and in all its tendencies is highly salutary. When the patient is able to take exercise, let the mode be adapted as much as possible to the seats of debility or disease; *but be careful of fatigue*.

*Medial Tonics*.—Of this class, nature has been lavish in her supplies. Two of her kingdoms, at least are exuberant in articles possessed of such powers; namely; the vegetable and mineral.

*Peruvian Bark*—Is one of the best strengthening remedies; it may be taken in powder alone, or conjoined with one-fourth of the Virginia snake root, in doses of a tea-spoonful, five or six times a day. When the doses are to be frequently repeated, as soon as one is taken, put another, with a small quantity of wine or water, into a glass, by which means it will become equally and universally moist; and may be mixed more easily and more smoothly. As many persons cannot take the bark in substance, it should be exhibited in infusion, or decoction.

*Cold infusion of Bark*.—Mix one ounce and a half of bark in powder in a quart of water; let it stand twenty-four hours, occasionally shaking the bottle, and then strain off the liquor. Dose, for adults, a wine glassful every two hours.

*Decoction of Bark.*—Put two ounces of coarsely powdered bark into a quart bottle of water, which, after being corked, is to be placed in a pot of water, and boiled for two or more hours. This is a very elegant preparation, and one of considerable efficacy. The dose of the decoction, for adults, is a wine glassful every two or three hours.

To correct some inconveniences occasionally produced by the bark, it is frequently combined with other remedies.—When it excites vomiting, or oppresses the stomach, cinnamon, or some aromatic, must be added; when it purges, opium; when it induces constipation, rhubarb; and where there is much acidity of the stomach, magnesia, or small portions of the mineral or vegetable alkali. As children cannot be induced to take the bark in sufficient quantities, it should be administered in the form of clysters, united with a little milk or flax-seed tea, to which may be added a little laudanum. Applied externally by means of bark jacket, (*See head Peruvian Bark.*) it will be found to have as salutary an effect as when exhibited internally.

*Quinine.*—For this article we are indebted to the French chemists. It is an alkali, obtained from the Peruvian bark, and is used in medicine in combination with sulphuric acid, forming the sulphate of quinine. It is the most powerful tonic with which we are acquainted, and so superior is it considered to the bark, that it has almost entirely driven that article out of use. Its dose being extremely small, and its taste that of a simple bitter, it will not disagree with the stomach when any tonic would be proper, and it may be given to children of any age. Like every other tonic, it should not be given during active fever, nor until the bowels are thoroughly cleansed. Dose, one grain every hour or two, according to circumstances. It may be taken mixed in syrup, or made into pills with crumbs of bread, or in solution. The solution is prepared as follows:

*Solution of Sulphate of Quinine.*—Take of sulphate of quinine, eight grains; water, one ounce; mix, and then add sulphuric acid, or elixir vitrol, from twenty to thirty drops. Dose, for adults, a tea-spoonful every hour or two.

*Pills of Sulphate of Quinine.*—Take of sulphate of quinine, twelve grains; crumbs of corn bread, or mucilage of gum Arabic, a sufficient quantity to make twelve pills. Dose, for adults, one every hour or two. It would sometimes be advantageous to add a little rhubarb to these pills, to prevent costiveness.

*Columbo.*—Dose, for adults in powder, a tea-spoonful; to be given in mint-tea or water.

*Infusion of Columbo.*—Take of Columbo, bruised, one ounce: boiling water, one pint. Dose, for adults, a large



wine-glassful every two hours. This bitter is peculiarly serviceable in cases of weak stomachs and bowels, attended with lax, and abounding in bilious crudities.

*Infusion of Gentian.*—Put half an ounce of gentian, bruised, and two drachms of orange peel, in a pint of cold water for twelve hours, then strain; when used in hot weather, add a gill of brandy. Dose, for adults, a wine glassful three times a day. Bitters are properly considered strengthening remedies, when not continued too long; they improve the appetite, and strengthen the stomach and bowels, but a constant and long-continued use of them, or any one tonic, is generally prejudicial,

The black oak, the dog-wood bark, the wild cherry tree, and thoroughwort, (*See Materia Medica.*) claim our attention as tonics.

*Mineral Tonics.*—Iron, in its operation on the system, evinces all the effects of a powerful and permanent tonic; no medicine, perhaps, leaves behind it such lasting impressions. The indications, therefore, that it is calculated to fulfil, are numerous and important, most of which, however, are embraced within the sphere of chronic debility.

*Iron Filings.*—If made with a fine file, will require no other preparation; the dose for adults is six or eight grains, or about as much as a common pinch of snuff, with an equal quantity of powdered ginger, to be mixed in syrup, or molasses, and taken two or three times a day. In this simple form, iron acts as well as in any more laborious preparation. It is a most useful tonic in all pale and relaxed habits, subject to watery swellings; particularly for children of this description with the pale faces and distended bellies, whose complaints are frequently accompanied by worms. The doses for young and old, provided the filings be made with a fine file, may be much the same, as no more acts than what is dissolved. The rust and tincture of steel are employed with the same view.

*Tonic Powders.*—Take of Columbo, in powder, and rust of steel, each, one ounce; unite them well together in a mortar, and then divide into forty-eight doses—one to be taken by adults, thrice a-day.

*Tonic Pills.*—Add to half an ounce of the tonic powder, a sufficient quantity of mucilage to form a mass, and make pills of an ordinary size. Three or four of them, or the number constituting a dose, to be taken thrice a-day. In cases of debilitated stomach, an equal quantity of powdered ginger may be added to the above.

*Chalybeate Wine.*—Put rust of steel, one ounce and a half; orange peel and gentian root, each half an ounce, into a bottle of wine. The vessel containing these ingredients is to be



exposed to the sun, or nor the fire, for three days, and to be repeatedly shaken during this time. This preparation is an excellent stomachic, and agreeable tonic. Dose, for adults, two or three tea-spoonsful thrice a-day.

*Blue Vitriol, or Sulphate of Copper.*—The fourth of a grain, united to a small portion of opium, given three or four times a-day, gradually increasing the dose, is celebrated as a valuable for obstinate intermittents. White vitriol, in doses from three to five grains, for adults, in the form of pills, is also considered highly useful as a tonic.

*Solution of Arsenic.*—This is a valuable tonic, and may be given with perfect safety, cautiously administered, to persons of every age.

*Pills of Sulphate of Quinine.*—Take of sulphate of quinine, twelve grains; mucilage of gum Arabic, a sufficient quantity to make twelve pills. Dose for adults, one every hour.

*Solution of Sulphate of Quinine.*—Take of sulphate of quinine, eight grains; powdered gum Arabic, thirty grains; cinnamon or ginger tea, one ounce.—Mix gradually. Dose, for adults, a tea-spoonful every hour, observing to shake the mixture.

*Nitric Acid*, as well as *Elixir Vitriol*, given in doses from ten to twenty drops, in a glass of sweetened water, thrice a-day, will be found very pleasant and useful tonic. They speedily quicken the appetite and restore tone to the digestive organs.

## ALTERATIVES.

*Alteratives.*—Are those medicines supposed to correct the acrimony which appears on eruptions of the skin, and in removing venereal complaints. These are almost exclusively mercurials, assisted by the warm bath, sarsaparilla, mezereon, slippery elm, lobelia, (*See Materia Medica*), nitric acid, tar water, &c.

*Mercurial Pills.*—Take of calomel, one drachm; opium and tartar emetic, each, ten grains; crumbs of bread, a small quantity; syrup, or mucilage of gum Arabic, sufficient to form a mass. Divide into forty parts; one pill to be taken night and morning by adults.

*Mercurial Solution.*—Take of corrosive sublimate, twenty-four grains; laudanum, half an ounce; spirits, one pint and a half.—Mix. Dose, for adults, one table-spoonful morning and night.

*Calomel.*—In doses of one or two grains, given every night, or every other night, drinking with it the following diet drink.

—These, together, make a powerful alterative for blotches on the skin, foul eruptions, and all other cases, in which the object is to remove obstructions, and sweeten the humors. An occasional warm bath greatly promotes their good effects, whilst, at the same time, it contributes to prevent the mercury attacking the mouth, and bringing on salivation, which, during the use of mercury, must be carefully watched and guarded against, by avoiding cold, and suspending the medicine, from time to time, for a few days.

*Alterative Diet Drink.*—Boil one ounce of the borings of lignumvitæ, and two ounces of split sarsaparilla, in three pints of water until it comes to a quart; then strain it through linen, to be drank in one or two days, by divided doses. The sarsaparilla, which is the least efficacious, is by far the most expensive article in this diet drink; it may therefore, be omitted, adding in its place half an ounce more of lignumvitæ, or two ounces of parsley roots. In either case, a handful of stoned raisins, or two or three sliced figs, or half an ounce of liquorice root, will render it more agreeable.

*Nitric Acid, diluted.*—Take of nitric acid, two drachms; water, one quart.—Mix. As this acid is not always to be got of equal strength, it would be best to make a quart of water as sour with it as can be drank; which quantity sweetened, may be taken daily by adults, in doses of a wine-glassful every hour or two. To prevent it injuring the teeth, it should be sucked through a quill, or its sharpness may be obtunded by washing the mouth with milk, or mucilage of gum Arabic.

Nitric acid is diffusible in its operations, pervading every part of the system, and imparting more or less vigor to all the functions. It is, hence, an exceedingly useful remedy in a great of variety of affections. Of these, perhaps, the most striking are certain forms of inflammation of the liver; to most glandular diseases, it is, indeed, well adapted. Where there is too much debility to justify the use of mercury, or when it has already been used ineffectually, it is unquestionably the best medicine that can be administered, and, therefore, should be uniformly employed in such cases.

## TINCTURES, ELIXIRS, &c.

*Laudanum.*—Take of purified opium, two ounces; brandy, two pints. Digest for eight or ten days, frequently shaking the bottle, then strain off the tincture.

*Tincture of Rhubarb.*—Take of rhubarb, three ounces lesser cardamon seeds, or ginger, bruised, half an ounce; brandy

or rum, two pints. Digest for eight or ten days, and then strain.

*Tincture of Bark.*—Take of Peruvian bark, powdered, two ounces; orange peel and Virginia snake-root, each half an ounce; brandy or rum, two pints. Digest for eight or ten days, and then strain.

*Tincture of Columbo.*—Take of Columbo root, bruised, three ounces; brandy, two pints. Digest for several days and strain.

*Tincture of Foxglove.*—Take of dried leaves of Foxglove one ounce; brandy, half a pint. Digest for a week, and filter through paper.

*Tincture of Cautharid's.*—Take of Cantharides, bruised, two drachms. brandy, one pint. Digest for seven or eight days, and strain.

*Tincture of Myrrh.*—Take of myrrh in powder, one ounce and a half; spirits, one pint. Digest for seven days, and strain.

*Paregoric Elixir.*—Take of purified opium, flowers of Benzoin, camphor, and essential oil of annis-seed, each two drachms; brandy, two pints. Digest for eight or ten days, frequently shaking the bottle, and then strain the elixir.

*Turlington's Balsam.*—Take of Benzoin three ounces; balsam of tolu, one ounce; aloes, half an ounce; brandy, two pints. Digest for seven days, and strain.

*Rheumatic Tincture.*—Take of gum guaiac, and vitrolated tartar, in powder, each, three ounces; spirits, two pints. Digest for eight or ten days, and strain. A dose to be taken twice or thrice a day.

*Bitters.*—Take of gentian root, two ounces; orange peel, and coriander seeds, each, one ounce; brandy, two pints.—Digest for several days, and then strain.

*Camphorated Spirits.*—Take of camphor, two ounces; brandy, one pint. Mix them together, that the camphor may be dissolved.

*Antimonial Wine.*—Take of tartar emetic, one drachm; boiling water, two ounces; wine, one pint. Dissolve the tartar emetic in the water, and when cold, add the wine. Dose, for adults, two tea-spoonsful every fifteen minutes, until it excites vomiting. To hasten its operation, the patient should drink freely of warm water. As a diaphoretic, it may be given in doses, from twenty to thirty drops, every two or three hours.

*Domestic Remedies for Rheumatism.*—Take of sarsaparilla and walnut shells, each, half a pound; antimony, half an ounce suspended in a bag; water three quarts. Simmer slowly by the fire down to two quarts. Strain and use a pint in broken doses daily.

*Or*, take a large handful of rattle-snake root, bruised; spirit, one quart; let it steep by the fire for several days, frequently shaking the bottle. Of this a wine-glassful is to be taken night and morning.

*Saturated Solution of Arsenic.*—Take of arsenic, in powder, about one drachm; water half a pint. Boil it for half an hour in a Florence flask, or in a tin saucepan, let it stand to subside, and when cold, filter it through paper. To two ounces of this solution, add half an ounce of spirit of lavender. A dose to be taken twice or thrice a day.

*Lime-Water.*—Pour two gallons of water, gradually, upon a pound of fresh burnt quick-lime, and when the ebullition ceases, stir them well together; then suffer the whole to stand at rest till the lime has settled; after which strain off the clear liquor, and keep it in vessels closely stoped. Calcined oyster-shells may be used instead of quick-lime.

*Tar-Water.*—Pour a gallon of water on two pounds of tar, and stir then strongly together with a wooden rod. When they have stood to settle two days, pour off the water for use.

*Caustic Alkali, or Soap Lees.*—Mix two parts of quick-lime, with one of pot ashes; and suffer them to stand till the lixivium be formed, which must be carefully filtrated through paper before it be used. If the solution does not happen readily, a small quantity of water may be added to the mixture.

*Ich Lotion.*—Take of corrosive sublimate, one drachm; crude sal ammoniac, two drachms; water, one pint and a half.—Mix.

*Solution of Crude Sal Ammoniac.*—Dissolve half an ounce of crude sal ammoniac in one pint and a half of cold water, and then add half a pint of vinegar.

*Saturine, or Lead-Water.*—Take of sugar of lead, two drachms; vinegar, one ounce; water, one pint and a half.—Mix.

## WARM AND DISCUTIENT LINIMENTS.

*Opodeldoc.*—Take of Castile soap, powdered, three ounces; camphor, one ounce; brandy, one pint. Digest the soap, in the spirit by the fire until it be dissolved, and then add the camphor.

*Volatile Liniment.*—Is made by mixing one part of spirit of hartshorn with two of sweet oil, good hog's lard, or fresh butter from the churn; they should unite into a uniform, white, soapy



mixture; and if they do not, it is owing to the spirit of hartshorn not being sufficiently caustic. When lard or butter is made use of, they should be first melted; they may then, like the oil, be mixed with the spirit of hartshorn, by shaking them together in a phial.

*Camphorated Oil.*—Take of camphor, half an ounce; olive oil, two ounces. Moisten the camphor with a little spirit, and then rub it in a mortar with the oil until dissolved.

*Andoyne Liniment.*—Is prepared by adding half an ounce of laudanum to two ounces of either of the above liniments.

*Mindererus' Spirit.*—Applied warm, by means of a soft flannel, very powerfully tends to discuss an incipient tumor, or other inflammatory swellings.

*Ether.*—Pour about a tea-spoonful into the hollow of the hand and immediately apply it over the part affected, keeping the hand on the part until the ether be evaporated, or as long as the patient can bear the heat it excites. No remedy so suddenly and effectually removes cramps and all spasmodic pains.

*Warm Plaster.*—Take of the gum plaster and Burgundy pitch, each one ounce; of blistering plaster, one quarter of an ounce; melt and mix them together. This is a most useful application whenever it is required to keep up a constant perspiration, and gentle irritation of the skin, over any particular part affected with rheumatism, or any internal pain, unattended with external inflammation.

*Charcoal Powder.*—Put lumps of charcoal a second time into the fire until they are red hot; then take them out, and as soon as they become cool, blow off the external ashes, and immediately reduce them to a fine powder, which must be kept in a corked bottle. This powder is admirable for correcting bad breath, as well as arresting the progress of mortification.

## EYE-WATER.

Take of vinegar, one ounce; spirits of brandy, half an ounce; rose or spring water, half a pint. The strength may be diminished or increased, according to circumstances. This is a useful application to weak, watery eyes, or to remove the pain and sense of pricking, experienced in the globes of the eyes, after they have been fatigued by close attention to some one object.

*Another.*—Take of sugar of lead and white vitriol, each, twenty grains; spring water, half a pint.—Mix. After the

sediment is formed, pour off the clean liquor, with which wash the eyes repeatedly during the day, and at bed-time apply a thick fold of linen or cotton rag moistened with it, over the eyes.

*Another.*—Take of corrosive sublimate, from two to four grains; water half a pint.—Mix. This solution may be used in general with great advantage in syphilitic or scrofulous cases, where the eye lids have been long affected with chronic inflammation.

### ASTRINGENT WASHES.

Take of lime-water, half a pint; brandy, four ounces.—Mix.

*Or*, lime-water, half a pint; corrosive sublimate, fifteen grains.—Mix.

*Or*, lime-water, half a pint; tincture of myrrh, one ounce.—Mix.

*Or*, make a solution, either of lunar caustic, or blue vitriol in water, of sufficient strength to produce a little smarting. To be applied on lint to the sore.

*Solution of Kali.*—Dissolve from one to two drachms of salt of tartar in half a pint of water. To be applied as above.

### GARGLES.

*Common Gargle.*—Take of barley water, or flax-seed tea, half a pint; crude sal ammoniac, one drachm.—Mix.

*Or*, sage tea, half a pint; vinegar, half an ounce; nitre, one drachm; honey, one ounce.—Mix

*Or*, take of decoction of barley, one pint; nitre, six drachms, honey three ounces.—Mix. These are mild, cooling applications, and very serviceable at the commencement of inflammatory affections of the tonsils and fauces.

*Gargle of Borax.*—Take of borax, two drachms; flax-seed tea, or mucilage of quince-seed, six ounces; honey, one ounce. The borax gargle is very much in use as a mild detergent in apthous affections in children, and for removing superficial inflammatory ulcerations of the gums; especially if attended with a copious secretion of saliva.

*Linseed Gargle.*—Take of flax-seed tea, twelve ounces; honey, two ounces; elixir vitriol, half a drachm. Where mild

astringents are indicated, this gargle will be found to answer very well.

*Astringent Gargles.*—Take of sage tea, or infusion of roses, half a pint ; vinegar and honey, each, two ounces ; alum, half a drachm.—Mix.

*Or*, Infusion of oak bark, half a pint ; honey, one ounce ; alum, half a drachm.—Mix.

*Detergent Gargles.*—Take of astringent gargle, half a pint ; tincture of myrrh, from half an ounce to an ounce.—Mix.

*Or*, take of corrosive sublimate, three grains ; dissolved in spirit of wine, half an ounce ; and then add decoction of bark, six ounces ; tincture of myrrh, half an ounce ; honey, one ounce.—Mix. In venereal cases, of long standing, the tonsils and uvala, or part of the fauces, are found in a state of ulceration ; in which cases, besides the internal administration of mercury, the parts should be frequently washed with the above gargle.

## CLYSTERS.

*Simple and Emollient Clysters.*—Milk and water, in equal parts ; flax-seed tea ; mallow tea ; infusion of quince-seed ; barley water ; mucilage of gum Arabic, or slippery elm ; thin starch ; from half a pint to a pint of either of these, should be administered a little more than milk warm. They are useful and efficacious where mere relaxing and emollient effects are required ; the addition of the mucilaginous substance will occasion them to be longer retained than simple water would be, and are particularly proper when any irritation or remarkable tenderness of the intestines exists : with the same intention, a table-spoonful of good sweet oil, fresh hog's lard, or fresh butter from the churn, may be added ; but, unless perfectly fresh, should be omitted, as the least rancidity will irritate and injure.

*Common Clyster.*—Take of barley water, or flax-seed tea, from one to two pints ; sweet oil, two or three ounces ; Glauber or Epsom salts, one or two ounces. Mix.

*Or*, take of warm water, one pint or more ; molasses, one gill, or brown sugar two table-spoonsful ; hog's lard, one spoonful, or sweet oil, two ounces. Mix. This quantity is intended for adults.

*Stimulating Clysters.*—Common salt and brown sugar, each two large table-spoonsful ; hog's lard, two table-spoonsful ; or olive or castor oil, four ounces ; water, one pint. Mix.

*Or*, take of senna, one ounce ; spring water, two pints. Boil them till a pint only remains ; and, to the strained liquor, add common salt and hog's lard, each two table-spoonsful. Mix.

*Turpentine Clyster.*—Take of turpentine, half an ounce; the yolk of an egg, flax-seed tea, or solution of gum Arabic, ten ounces. Rub the turpentine with the egg till they are perfectly incorporated, and add the linseed infusion. The turpentine injection has frequently been of service in suppression of urine, arising from a stone in the bladder.

*Anodyne Clyster.*—A gill of new milk, or thin starch, or the same quantity of any of the mucilaginous substances enumerated under the head of Simple and Emollient Clysters, with the addition of one or two tea-spoonsful of laudanum, for adults. In general, the patient will bear three times the quantity of laudanum administered in this way, than would be a proper dose when taken into the stomach: so that, to procure rest, twenty-five drops would be given in a draught, seventy-five may be administered in a clyster, and the sickness, and other ill consequences, which some persons complain of after laudanum has been taken into the stomach, seldom follow when administered by clyster.

*Nourishing Clysters*—May be formed by adding to a gill or half a pint of beef tea, arrow root, or gruel, twenty or thirty drops of laudanum. The addition of laudanum is made to prevent the clyster from being rejected.

## OINTMENTS.

*Simple Ointment.*—Take of olive oil, five parts; white wax, two parts. Mix them together, by a slow fire, and stir until it be cold.

*Saturine Ointment.*—Take of sugar of lead, two drachms; white wax, two ounces; olive oil, half a pint. Rub the sugar of lead, previously powdered, with some part of the olive oil; then add it to the wax melted with the remaining oil, and stir the mixture until it be cold.

*Basilican Ointment.*—Take of rosin and bees-wax, each, one pound; hog's lard, one pound and a half. Melt them together by a slow fire, and strain the mixture while hot.

*Turner's Cerate.*—Take of calamine, prepared, yellow wax, each half a pound; hog's lard, one pound. Melt the wax with the lard, and as soon as the mixture, exposed to the air, begins to thicken, mix with it the calamine, and stir the cerate until it be cold.

*Mercurial Ointment.*—Take of quicksilver, half a pound; mutton suet, the more rancid the better, or old mercurial ointment, one ounce; hog's lard, one pound. Triturate the mercury with the prepared suet and a small portion of the lard, till the globules perfectly disappear; after which, add



the remainder of the lard, and let the whole be intimately mixed. It is requisite that the trituration be constant and uniform, and continued, in the first instance, till the globules be perfectly extinguished, and afterwards till the ointment be intimately mixed. If a small quantity of old mercurial ointment, or rancid lard, be employed, the extinction of the quicksilver is much more rapid and effectual. This ointment is principally employed, with the intention of introducing mercury, in an active state, into the circulating system, which may be effected in the sound skin of any part by gentle friction, particularly on the inside of the legs and thighs. Camphor, in the proportion of a drachm to an ounce of the ointment, is sometimes added, in order to render this application more stimulating, and to promote the absorption of mercury.

*Hemorrhoidal Ointment.*—Take of galls levigated, two parts; hog's lard, eight parts. Mix.

*Tar Ointment.*—Take of tar and mutton suet, each, one pound. Melt them together, and strain through coarse linen. This is much extolled for removing tettery eruptions, and for curing scald-heads.

*Itch Ointment.*—Take of hog's lard, two ounces; sulphuric acid, two drachms. This ointment should be formed in a Wedgewood's or glass mortar. It is said to be an effectual cure for the itch.

*Blistering Plaster.*—Take of wax, rosin, tallow, and cantharides, each equal parts. Having melted the three first ingredients together, sprinkle and mix in the flies powdered a little before they become firm. When the blistering plaster is not at hand, its place may be supplied by sprinkling the flies over any ointment or paste, spread thin, on leather or cloth.

## CATAPLASMS AND POULTICES.

*Cataplasma of Alum, commonly called Alum Curd*—Is made by briskly agitating the whites of two eggs with a lump of alum till a coagulum is formed. It is useful in some cases of ophthalmia, when attended with a watery excretion, if applied to the eye between two pieces of thin linen rag. The alum curd has been found an efficacious remedy applied to chilblains, previous to the skin cracking and becoming sore.

*Cataplasma of Mustard.*—Take of good mustard and flour, or crumbs of bread, each equal parts; sharp vinegar, sufficient to form a poultice. It may be rendered more stimulating, if necessary, by the addition of a little garlic or horseradish.

*Cataplasma of Common Salt.*—Take of linseed, or Indian

meal, and crumbs of bread, each equal parts; saturated solution of common salt, sufficient to make a poultice. This form of poultice has lately been brought into considerable repute for the reduction of indolent strumous swellings and enlargement of the glands. After being some time used, it generally occasions very considerable redness upon the surface, and excites, not unfrequently, so much inflammation upon the part to which it is applied, that it becomes necessary to abstain from its use, and substitute the common white bread and milk poultice in its stead; as soon, however, as the inflammation subsides, the saline poultice should again be employed; and by altering this mode of practice, strumous swellings, and scrofulous enlargements, of a chronic, obstinate nature have very frequently been totally dispersed.

*Saturnine Poultice.*—Crumbs or slices of bread are to be soaked in lead water, which are afterwards to be simmered in an earthen vessel, over a gentle fire, to a due consistence. To superficial inflammations, this form of cataplasms, or making a dough of corn meal and lead water, frequently repeated, are very beneficial.

*Milk and Bread Poultice.*—This poultice, which is generally in use, is commonly made by soaking crumbs or slices of bread in milk, and simmering them together over a gentle fire till they are reduced to the proper consistence of a poultice. The whole is then to be beat smooth with a spoon, and applied as warm as the patient's feeling will readily admit, which should be repeated every four hours.

*Flax-seed Poultice.*—Take of flax-seed bruised, half a pound; boiling water, half a pint, to be formed into a poultice.

Or, this poultice may be made by stirring linseed powder into boiling water, in a quantity sufficient to form it of a proper consistence.

*Carrot Poultice.*—Boil any quantity of fresh carrots till they are sufficiently soft to be beat into a smooth, even pulp, which is to be applied as a poultice. This has been found very effectual for sweetening cancerous sores and foul ulcers, thereby rendering the condition of the patient much more comfortable. Turnips used in the same way have been found to produce the same effects, and apparently in a greater degree than carrots.

*Charcoal Poultice.*—To a sufficient quantity of bread and milk, or linseed poultice, stir in as much charcoal, in fine powder, as it will bear, and let the whole be well mixed. This cataplasm is often used to sweeten foul, offensive ulcers and venereal sores, and for this purpose it is of great service; it will, likewise, often dispose them to assume a more favorable and healthy aspect.

# DIET FOR THE SICK.

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## SAGE TEA.

Take of the leaves of green sage, plucked from the stalks and washed clean, half an ounce, (a handful ;) loaf sugar an ounce ; outer rind of lemon peel, undried, a quarter of an ounce, or a little lemon or lime juice ; boiling water, two pints. Infuse them in a mug or pitcher, covered, for half an hour, and then pour off the tea. When the sage is dried, it must be used in a less proportion than that above.

In the same manner teas may be made of balm, groundivy, cat-mint, rosemary, southern wood, &c. The lemon peel, or lemon juice, being omitted or not, and the sugar lessened or increased, as occasion requires.

Lemons, or apples cut in slices, tamarinds, currants, fresh or in jelly, cranberries, dried whortleberries infused in boiling water, sweetened with sugar or syrup ; these may be so prepared and varied in form, as to suit every taste, and to answer the purpose of pleasant, cooling, and salutary drinks, in all febrile complaints. Such drinks should always be kept in a covered vessel.

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## BRAN TEA.

Take of bran, fresh ground, two handfuls ; molasses or honey, one spoonful ; boiling water, six pints. Mix them well, and when they have stood covered about three or four hours, strain off the tea.

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## FLAX-SEED TEA.

Take of flax-seed, one ounce ; white sugar, one ounce and a half ; lemon juice, two table-spoonsful ; boiling water, two pints. Infuse them in a pitcher some hours, and then strain off the liquor. An ounce of liquorice shaved, may sometimes be used instead of sugar.

## CAMOMILE TEA.

Take of camomile flowers, one handful; boiling water, one gallon. When they have stood covered about half an hour, strain off the tea. If the drinking this tea be to strengthen the stomach, it must be made stronger, as for instance, about a quarter of an ounce to a pint.

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## LEMONADE.

Take of the outer rind of fresh lemon peel, about one drachm; lemon juice, one ounce; double refined sugar, two ounces; boiling water, a pint and a half. When they have stood in a vessel about ten minutes, strain off the liquor.

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## ORANGEADE.

Take of the fresh outer rind of Seville orange, one drachm; orange juice, two or three table-spoonsful; white sugar, one or two ounces, or enough to make it of an agreeable sweetness; boiling water, one quart. When they have stood in a pitcher about ten minutes, strain off the liquor.

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## IMPERIAL DRINK.

Take of cream of tartar, one drachm; the outer rind of fresh lemon or orange peel, half a drachm; loaf sugar one ounce; boiling water, two pints. When they have stood in a pitcher about ten minutes, strain off the liquor.

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## BARLEY WATER.

Take a handful of either pearl barley, or the common sort, wash it clean, first in cold, and afterwards in boiling water, then simmer it in a quart of water for an hour; when half done, put into it a bit of fresh lemon peel and a little sugar. Rice water may be prepared as above.

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## TOAST WATER.

Toast slowly a thin piece of white bread till extremely brown and hard, but not the least black, then plunge it into a jug of cold water, and cover it over an hour before used.



## PECTORAL DRINK.

Take of common barley and raisins stoned, each, two ounces; liquorice root, half an ounce; water, two quarts. Boil the water first with the barley, then add the raisins, and afterwards, near the latter end of the boiling, the liquorice. The decoction then will be fully completed, when one quart only of the liquor will be left after straining.

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## ARROW-ROOT JELLY.

Mix a large spoonful of the powder with a tea-cupful of cold water, by degrees, then pour this into a pint of boiling water, stirring it well, and when it boils it is finished. A little sugar and nutmeg may be added. Or prepare it as directed under the head of Arrow-root. (*See Materia Medica.*)

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## SAGO JELLY.

Take of sago, washed well, one large spoonful; water, nearly a pint. Boil them gently, stirring often, till the mixture is smooth and thick; then add two spoonsful of wine, a little nutmeg, and sweeten it to the taste. A bit of lemon peel added to it when boiling, gives it a pleasant taste and flavor, and with some patients it agrees better when boiled in milk.

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## TOPIOCA JELLY.

Choose the largest sort, pour cold water on to wash it two or three times, then soak it in fresh water five or six hours, and simmer it in the same until it becomes quite clear, then put lemon juice, wine, and sugar. The peel should be boiled in it. It thickens very much.

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## CALVES' FEET JELLY.

Boil two calves' feet in one gallon of water till it comes to a quart, then strain it, and when it is cold, skim the fat entirely off, and take the jelly up clean; if there be any settling at the bottom, leave it. Put the jelly into a saucepan, with a pint of mountain wine, half a pound of loaf sugar, the juice of four large lemons, and the white of six or eight

eggs, beat up the whisk ; mix all well together, set the saucepan upon a clear fire, and stir the jelly till it boils. When it has boiled a few minutes, pour it through a flannel bag till it runs clear. Have now ready a large china basin, with some lemon peel in it, cut as thin as possible, let the clear jelly run upon them while warm, and from these it will acquire both an amber color, and an agreeable flavor. Afterwards it may be poured into glasses.

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### BOILED FLOUR.

Take a pound or two of fine flour, tie it up as tight as possible in a linen rag, dip it repeatedly in cold water, and dredge the outside with flour till a crust is formed around it, which will prevent the water soaking into it while boiling. It is then to be boiled till it becomes a hard dry mass. Two or three table-spoonsful of this may be grated down and boiled in milk and water to a proper thickness, and sweetened to the patient's taste, and a little nutmeg or other spice may be added. This forms an excellent food in dysentery, and in bowel complaints in children.

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### WATER GRUEL.

Take of the coarse part of corn meal or grist, two handfuls ; water, three quarts ; boil it till only two quarts remain, then strain off the liquor, and season it to the palate with salt, sugar and nutmeg, to which may be added a spoonful or two of wine.

Or, take of oatmeal, two large spoonsful ; water, one quart ; mix them well, and boil them about ten or fifteen minutes, stirring often ; then strain the gruel through a sieve, and add sugar and salt enough to make it agreeable to the taste. When it is designed as a meal, dissolve it in a little butter, and then add bread and nutmeg, as occasion requires.

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### RICE MILK.

Take a large tea-cupful of rice, washed nicely ; water, one pint ; boil it for about half an hour, then add a quart of new milk ; let it simmer over a slow fire till it is sufficiently done, and then add to it a little sugar and nutmeg.

## TREACLE POSSET.

Take of milk, one pint ; put it on the coals till it just begins to boil, then add two or three table-spoonsful of treacle or molasses, stirring the milk as it is poured in. When mixed it is fit for use.

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## PANADO.

Take of bread, one ounce ; mace, one blade ; water, one pint. Boil them without stirring, till they mix and turn smooth, then add a little grated nutmeg ; a small piece of butter, and sugar enough to make the mixture agreeable. When butter is not approved of, two spoonsful of wine may be used in its stead.

Or, set a little water on the fire, with a glass of white wine, some sugar, and a scrape of nutmeg and lemon peel ; meanwhile, grate some crumbs of bread. The moment the mixture boils up, keeping it still on the fire, put the crumbs in, and let it boil as fast as it can. When of a proper thickness just to drink, take it off.

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## WHITE CURDLE.

Take of oatmeal, two table-spoonsful ; water, one quart ; mace, two or three blades ; three to four cloves. Mix them well together, boil them about fifteen minutes, stirring often, then add a few slices of the outer rind of a lemon ; when the mixture has boiled about fifteen minutes, strain it through a sieve. As it is used, add to it white wine, grated nutmeg, white sugar enough to make it agreeable to the patient.—Toasted bread is to be added likewise, as the appetite may require.

Or, put into a pint of fine gruel, made of coarse corn meal or grits, while it is boiling hot, the yolk of an egg, beaten with sugar, and mixed with a large spoonful of cold water, a glass of wine, and nutmeg. Mix by degrees. Some like gruel, with a glass of table beer, sugar, &c., with or without a tea-spoonful of brandy.

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## FLOUR CAUDLE.

Into five large spoonsful of the purest water, rub smooth one desert-spoonful of fine flour. Set over the fire five spoons-

ful of new milk, and put two bits of sugar into it; the moment it boils, pour into it the flour and water, and stir it under a slow fire twenty minutes. It is a nourishing and gently astringent food.

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### RICE CAUDLE.

When the water boils, pour into it some grated rice, mixed with a little cold water; when of a proper consistence, add sugar, lemon peel, and cinnamon, and a glass of brandy to a quart. Boil all smooth.

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### BREAD SOUP.

Take the upper crust of a roll, the drier the better; or two or three crackers, cut or break them into pieces, and put it into a saucepan, with a pint of water, and a piece of butter about half as big as a walnut; boil them well, every now and then stirring and beating them, till the bread is mixed; then season the soup with a very little salt, and pour it into a basin.

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### EGG SOUP.

Take of water, one pint; the yolk of an egg; butter, the bigness of a small walnut; sugar enough to make it agreeably sweet. Beat up the yolk with the water, and then add the butter and sugar. Stir it all the time it is upon the fire; when it begins to boil, pour it to and fro between the saucepan and mug till it be smooth and well frothed, and then it will be fit to drink.

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### BEEF TEA.

Cut one pound of lean beef into thin slices or shreds, and boil it in a quart of water for twenty minutes, taking off the scum as it rises. After it grows cold, the liquor should be strained, in which state it resembles a light infusion of green tea, has a very grateful flavor, and is more strengthening than other broths.

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### CHICKEN BROTH.

Take a middling-sized chicken, divide it into two parts, put



one-half into a saucepan, with a quart of water, seasoned with a little salt; as the scum rises, take it off; then may be added a small bundle of parsley, and a crust of bread; when they have boiled about three-quarters of an hour, the parsley may be taken out, and the broth will be fit for use, or it may be used seasoned only with salt.

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### MUTTON BROTH.

Take of mutton, one pound; water three pints. Put them into a saucepan, and set it upon a clear fire, throw in a little salt, and as the scum rises, take it carefully off with a spoon; then add a small onion, if there be no objection to it, and a little parsley. Boil till the meat is very tender, then take it out, pour the broth into a basin, and when cold, skim the fat part, which is congealed on the surface, entirely off; after which, a part of the broth may be warmed and given to the patient as often as needful. A little boiled rice or barley may be added here occasionally.

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### CALVES' FEET BROTH.

Boil two feet in three quarts of water, to half, strain and set it by; when to be used, take off the fat, put a large tea-cupful of the jelly into a saucepan, with half a glass of sweet wine, a little sugar and nutmeg, and beat it up till it be ready to boil, then take a little of it, and beat by degrees to the yolk of an egg, adding a bit of butter, the size of a nutmeg, stir all together, but do not let it boil. Grate a bit of fresh lemon peel into it.

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### BOILED PIGEON.

Take one pigeon, drawn and washed very clean; boil it in sufficient quantity of milk and water; that is, about half a pint of each, for fifteen minutes. When thus prepared, it may be taken out and eaten with the following sauce:

Take the liver parboiled, bruise it fine, with a little parsley boiled and chopped; melt some butter, and mix a little of it first with the liver and parsley, then add the rest, and pour the whole upon the pigeon.

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### TO BROIL PIGEONS.

After cleaning, split the backs, pepper and salt them, and

broil them very nicely ; baste with butter, and serve as hot as possible.

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### ROASTED PIGEONS.

Should be stuffed with parsley, either cut or whole, and seasoned within. Serve with parsley and butter.

Partridges and other birds may be dressed as above.

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### BREAD PUDDING.

Take of crumbs of bread, about half a pound ; new milk, about three-quarters of a pint. Pour the milk boiling hot upon the bread, and let it stand about an hour covered close up ; then add the yolks of two eggs, well beaten ; a little grated nutmeg ; about a spoonful of rose water ; a little salt and sugar, also, if agreeable ; beat the bread well, and mix the whole together with a spoon. Tie it then close up in a clean linen cloth, and when the water boils, put it in ; boil about three-quarters of an hour, then take it out, lay it upon a plate, pour over it some melted butter mixed with a little mountain wine, if there be no objection, and sprinkle a little sugar over all.

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### BATTER PUDDING.

Rub three spoonsful of fine flour extremely smooth, by degrees, into a pint of milk ; simmer till it thickens, stir into it two ounces of butter, set it to cool, then add the yolks of three eggs ; flour a cloth that has been wet, or butter a basin, and put the batter into it ; tie it tight, and plunge it into boiling water, the bottom upwards. Boil it an hour and a half, and serve with sweet sauce. If approved, a little ginger, nutmeg, and lemon peel, may be added.

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### RICE PUDDING.

Wash and pick some rice, throw among it some pimento finely powdered, but not much ; tie the rice in a cloth, and leave room for it to swell. Boil it in a quantity of water for an hour or two. When done, eat it with butter and sugar, or milk. Put lemon peel if you please. It is very good without spice, and eaten with salt and butter.

Or, swell the rice with a very little milk over the fire, then

add some more milk, an egg, sugar, allspice, and lemon peel. Bake in a deep dish.

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### POTATO PUDDING.

Take eight ounces of boiled potatoes, two ounces of butter, the yolks and whites of two eggs a half pint of new milk, one spoonful of white wine, a morsel of salt, the juice and rind of a lemon beat all to froth ; sugar to taste. A crust or not, as you like. Bake it.

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### CUSTARD PUDDING.

Mix by degrees a pint of good milk with a large spoonful of flour, the yolks of four eggs, and a little pounded cinnamon. Butter a basin that will exactly hold it, pour the batter in, and tie a floured cloth over. Put in boiling water over the fire, and turn it about a few minutes, to prevent the egg going to one side. Half an hour will boil it.

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### WINE WHEY.

Take of new milk two pints ; water one pint ; white wine one gill. Put the milk and water into a saucepan, well tinned, and set them upon a clear fire, and when they begin to boil, throw in the wine. Boil them about fifteen minutes, during which time, as the crude, or cheesey part collects, take it off with a spoon, and if the whey be not clarified enough with this quantity of wine, add a spoonful or two ; then boil it a little longer and skim, it, by which means it will become sufficiently fine, and then it may be poured into a basin for use.

Or, put half a pint of new milk on the fire ; the moment it boils up, pour in as much sound raisin wine as will completely turn it, and it looks clear ; let it boil up, then set the saucepan aside till the crude subsides, and do not stir it. Pour the whey off, and add to it half a pint of boiling water, and a bit of white sugar. Thus you will have whey perfectly cleared of milky particles, and as weak as you choose to make it.

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### MUSTARD WHEY.

Boil one ounce and a half of mustard in powder, in a pint of milk, and an equal portion of water, till the crude be entirely

separated, after which the liquid is strained through a cloth. This preparation is one of the most pleasant and efficacious forms in which mustard can be given. A tea-cupful sweetened with sugar, taken three or four times a day, is exceedingly beneficial in low fevers as a diaphoretic cordial. Vinegar and lemon whey may be formed in the same manner as wine whey.

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### ALUM WHEY.

Boil two drachms of powdered alum in a pint of milk till it be curdled; then strain out the whey. This astringent preparation is often employed with advantage in uterine hemorrhage, and in diabetes. The dose is two or three ounces, or as much as the stomach will bear, several times in the day.

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### TO MULL PORT WINE.

Boil some spice in a little water till the flavor be gained, then add an equal quantity of wine, some sugar and nutmeg; boil it together, and serve with toast.

Another way. Boil some allspice, or a bit of cinnamon, and some grated nutmeg a few minutes, in half a pint of water; then pour to it a pint of wine, add sugar to your taste, beat it up, and it will be ready.

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### TO MULL WHITE WHINE.

Boil a pint of good wine with a table-spoonful of allspice; beat up the yolk of an egg with a little sugar, and add to it the wine while boiling.

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### REFRESHING DRINKS IN FEVERS.

Boil two quarts of water with two ounces of tamarinds, an equal quantity of currents and raisins, till near a fourth be consumed. Stirring it on a piece of lemon peel, which remove in an hour, as it gives a bitter taste if left longer.

Tamarinds, currants, fresh or in jelly, or scalded currants, or cranberries, with cold water, make excellent drinks; a little sugar may be added, if agreeable.



## LEMON WATER.

Put two slices of lemon, thinly pared, into a tea-pot, a small piece of the peel and some white sugar, pour in a pint of boiling water, and stop it close two hours.

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## APPLE WATER.

Cut two large apples in slices, and pour a quart of boiling water on them, or on roasted apples, strain in two or three hours, and sweeten lightly.

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## OATMEAL TEA.

Take of oatmeal, one handful ; boiling water, one gallon. Mix them in a deep pan, and when they have stood about half an hour, or until the meal is subsided, strain off the tea.

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## WHITE WINE WHEY.

Take of new milk, two pints ; water, one pint ; white wine, one gill. Put the milk and water into a saucepan, well tinued, and set them upon a clear fire ; and when they begin to boil, throw in the wine. Boil them about fifteen minutes, during which time, as the curd or cheesey part collects, take it off with a spoon, and if the whey is not clarified enough with this quantity of wine, add a spoonful or two more ; then boil it a little longer and skim it, by which means it will become sufficiently fine, and then it may be poured into a basin for use. Or it may be clarified thus : beat the white of an egg, let the whey cool, mix them together, boil them for a minute or two, and then strain off the whey through a cloth.

Vinegar whey is made in the same manner as white wine whey, using vinegar instead of wine.

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## RENNET WHEY.

Take of new milk, one quart ; rennet, a large spoonful. Put the milk into a saucepan, and when it is a little more than milk warm, mix the rennet with it ; keep it on the fire in a gentle degree of heat, till the curd, which, as it separates from the serous part and collects, is taken off with a spoon, and then the whey will be fit for use.

The rennet is prepared thus:—take a calf's bag, with the curd in it, (that is the duodenum replete with congealed chyle) pick the hairs entirely out, and wash the curd, and likewise the bag very clean with water; then put the curd into the bag again, with near half a pound of salt, and let them stand in a clean glazed pan about a week; then take three pints of water and one pound of salt, boil and skim until the liquor comes to two pints, set it by, and when it is cold pour it upon the bag in the pan. When it has stood thus about a week longer, the brine or liquor (now called rennet,) will be fit for use, and keep good for several months.

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### OXYCRATE.

Take of white wine vinegar, four spoonsful; virgin honey, an ounce and a half; spring water, one quart. Mix them together in a white stone or porcelain vessel.

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### THE VULNERARY DRINK.

Take of ground-ivy, coltsfoot, and liquorice, each one ounce; elecampane, half an ounce. Boil them in four pints and a half of water, to four pints, and then strain off the liquor.

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### RICE GRUEL.

Take of ground rice, two ounces; cinnamon, a quarter of an ounce; water, four pints. Boil them above half an hour, the cinnamon being put in near the latter end of the decoction; then strain the gruel through a sieve, and add of double refined sugar, (sugar of roses, or syrup of quinces) enough to make it agreeable to the patient's taste. When this is to be used as a meal, the rice must be boiled above an hour, in only a quart of water, with half the quantity of cinnamon thrown in towards the latter end of the decoction, and then wine added, as occasion requires.

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### RICE MILK.

Take a large tea-cupful of rice, washed nicely; water, one pint; boil it for half an hour, then add a quart of new milk; let it simmer over a slow fire till it is sufficiently done, and then add to it a little sugar and nutmeg.

## ELDERBERRY SYRUP.

To a pint of the juice of the berries add a pound of the best Muscorado sugar, and boil it until it becomes a syrup, carefully taking off the scum, as long as any rises.

One or two table-spoonfuls of this syrup added to a pint of water, makes a wholesome and pleasant beverage.

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## POTATO FLUMMERY.

Take of potatoes, one pound. Boil them gently in a sufficient quantity of water, till they are brittle or tender; then take them out of the water, and peel the skins entirely off. When this is done, add salt enough to season them; mash them well, and put them into a saucepan again, with a quarter of a pint of milk and two ounces of butter; warm them a little, during which time, let them be well mixed and beat fine and smooth with a spoon. The mixture then, which may be called flummery, will be fit for use, and may be eat either by itself or with bread.





# GLOSSARY,

OR,

## EXPLANATION OF TECHNICAL TERMS.

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- Abdomen, the belly.  
Ablution, the washing of the body externally, as by bath; or internally, by diluting fluids.  
Abortion, miscarriage.  
Abortives, producing abortion.  
Abrade, to wash by friction; and expressly to express the action of sharp corrosive medicines.  
Abscess, a tumor containing matter.  
Absorbent, medicines to correct acidity, and absorb or dry up superfluous matter.  
Absorption, the act of absorbing.  
Abstemious, sparing in diet; refraining from a free use of spirits.  
Abstraction, the act of separating, or state of being separated.  
Accelerate, to hasten, to increase the progress.  
Accession, a coming to; an acceding to and joining the invasion of a fit, or periodical disease, or fever.  
Accumulate, to collect in a mass or quantity.  
Aciscent, having a tendency to acidity.  
Acid, sour.  
Acidity, sourness.  
Acidulate, to make moderately acid.  
Acme, full height.  
Acrid, sharp; pungent; bitter.  
Acrimony, sharpness; having the quality to corrode, dissolve, or destroy.  
Acute, sharp; an acute disease is one that comes immediately to a crisis, as pleurisy's opposed to chronic.  
Adipose, fat.  
Adhesive, sticky, tenacious.  
Adult, of full age, beyond puberty.  
Aerate, to combine with carbonic acid.  
Aeffusion, pouring one thing on another.  
After-birth, or placenta-cake, is the substance, which connects the child to the mother.  
After-pains, pains that occur after the labor, before the delivery of the after-birth or placenta.
- Aliment, nourishment.  
Alimentary canal, the stomach and intestines.  
Ague-cake, enlargement of the spleen.  
Alkali, any substance, which, mingled with acid, produce fomentation.  
Alternating, belonging to terms.  
Ameliorate, to grow better; to make better.  
Ammonia, volatile alkali; a substance which, in its purest state, is gas.  
Amputate, to cut off.  
Amputation, the act of amputating.  
Anasarca, a species of dropsy.  
Anatomical, belonging to anatomy.  
Anatomy, the doctrine of the structure of the body.  
Angina, quinsy.  
Anodyne, composing medicines, and such as mitigate pain.  
Anomalous, deviating from a general rule.  
Anormal, irregular, unnatural.  
Antidote, a medicine to destroy poisons.  
Antifogmatics, drams.  
Antiphlogistic, counteracting inflammation.  
Antiscorbutic, good against the scurvy.  
Antiseptics, medicines to correct putridity or rottenness.  
Antispasmodic, whatever tends to prevent or remove spasm.  
Annis, the fundament.  
Aperient, opening.  
Aperture, an opening.  
Approximate, to approach.  
Apthous, resembling the thrush.  
Apyrexia, the period of intermission in agues.  
Aqueous, watery.  
Areola, the circle which surrounds the nipple or breast.  
Aromatic, spicy, pungent.  
Artery, a conic canal conveying blood from the heart to all parts of the body.

- Arterial**, pertaining to the arteries.  
**Arthritis**, rheumatic pains of the joints.  
**Aseites**, a dropsy, or tense elastic swelling of the body, with fluctuation from a collection of water.  
**Aspersio**, a sprinkling.  
**Asphyxia**, apparent death, suspended animation.  
**Asthma**, a shortness of breath.  
**Asthenia**, diminished vital energy.  
**Astriction**, the act of binding close; the stoppage of the hemorrhages.  
**Astringents**, medicines to correct looseness and debility.  
**Ataxic**, irregularity of the symptoms or the animal functions.  
**Attenuants**, medicines for reducing the body.  
**Auditory**, that has the power of hearing.  
**Austere**, sour, harsh, rough to the taste.  
**Aversion**, dislike.
- Baneful**, poisonous.  
**Basillicon**, of great virtue: an ointment made of one part each of yellow wax, black pitch, and resin and four parts of olive oil.  
**Bougie**, a taper body introduced into a passage to keep it open.  
**Belladonna**, deadly night shade.  
**Bile**, a yellow, bitter liquor, separated from the blood in the liver.  
**Biliary**, belonging to the bile.  
**Billious**, containing a redundancy or bad state of bile.  
**Bland**, mild, soft, gentle.  
**Blennorrhœa**, a morbid secretion of mucus.  
**Bolus**, a medicine in a mass larger than pills.  
**Brawny**, muscular; fleshy; bulky; having strong muscles; strong.  
**Bronchia**, the air tubes in the lungs.  
**Bronchotomy**, an incision into the wind pipe.  
**Bulbous root**, as garlic and onion—it is either solid, as in the tulip or turnip; scaly, as in the lily; coated, as in the onion.  
**Bulimia**, insatiable craving for food.  
**Buttocs**, the rump, or the protuberent part behind.
- Cachexia**, a general weak, relaxed, and disordered state, without fever.  
**Calculus**, stony or gravelly.  
**Callous**, hard or firm.  
**Calcareous**, having the quality of lime.  
**Cantharides**, the spanish flies used in blistering.  
**Capillary-vessels**—**Capillaries**, the very minute vessels between the arteries and veins.
- Capsule**, a dry hollow vessel, containing the seed or fruit.  
**Cardia**, the upper orifice of the stomach.  
**Cardiac region**, the pit of the stomach.  
**Carious**, rotten, applied principally to the bones and teeth.  
**Carminatives**, medicine for dispelling wind.  
**Carbonade**, flesh, fowl or the like cut across seasoned and broiled.  
**Carotids**, the arteries that convey the blood to the head.  
**Cartilage**, gristle; a smooth, solid, elastic substance, softer than bone.  
**Catamenia**, the monthly discharge of females.  
**Cataplasm**, a poultice or soft plaster.  
**Catarrh**, a discharge from the head or throat.  
**Catarrhus**, pertaining to catarrh.  
**Cathartic**, a purge.  
**Catheter**, a pipe to draw off urine.  
**Casualty**, an accident; that which comes by chance; an accident that produces unnatural death.  
**Caustics**, burning applications.  
**Cauterized**, burnt or seared with a hot iron, or fire.  
**Cautery**, the act of burning with a hot iron or caustic.  
**Cecum**, or blind gut, is a pouch of the colon three inches long.  
**Cephalic**, relating to the head.  
**Cellular**, containing cells or consisting of cells.  
**Cerebral**, relating to the brain.  
**Cerebrum**, the brain.  
**Cervical vertebrae**, the joints of the spine in the neck.  
**Cervix uteri**, neck of the uterus.  
**Chalybeate**, impregnated with particles of iron.  
**Chorea**, St. Vitus, dance.  
**Chronic**, lingering disease, in opposition to acute.  
**Chyle**, a milky fluid, separated from the aliment in the intestines, mixing with and forming the blood.  
**Chyme**, the food after it has been digested and passed from the stomach into the bowels.  
**Cicatrix**, a scar.  
**Circumspection**, caution; a careful examination.  
**Clammy**, thick, viscous, adhesive; soft and sticky.  
**Clyster**, an injection.  
**Coagulate**, to curdle, to congeal.  
**Coagulum**, a curd.  
**Cognomen**, the same name.  
**Collapse**, to close by falling together.  
**Colliquative**, melting; dissolving, indicating a morbid discharge of the animal fluids.

- Collyra, partaking of the nature of collyrim.
- Collyrium, eye salve, eye wash; a topical remedy for disordered eyes.
- Colon, the largest division of the intestinal canal.
- Coma, profound lethargic stupor, or sleep.
- Comatose, morbidly sleepy.
- Cominotion, agitation.
- Compress—compression, several folds of linen rags, a bandage.
- Concave, hollow, and arched or rounded.
- Concentric, having a common centre.
- Conception, the act of conceiving.
- Conceive, to become pregnant.
- Coactive, having the power of digesting or ripening.
- Concretion, the act of concreting; the process by which soft or fluid bodies become thick, consistent or solid.
- Concussion, the act of shaking; the state of being shaken, a shock.
- Condiment, seasoning, something to give relish to food.
- Confluent, running together.
- Congel, to change from fluid to a solid state.
- Congestion, the accumulation of blood in a part.
- Conjoin, to unite, to join.
- Conserve, to preserve in a safe and sound state.
- Constipation, obstruction, costiveness.
- Constriction, a drawing together, or contraction.
- Contagion, infectious matter.
- Contortion, a twisting or wresting of a limb or member of the body out of its natural situation; the iliac passion; partial dislocation.
- Contract, to draw into a less compass.
- Contra indicato, to forbid the usual remedies.
- Contusion, a bruise.
- Convalescence, recovery from sickness.
- Convex, opposite to concave, rising or swelling on the exterior surface.
- Convulsions, violent motions, fits.
- Copious, abundant, plentiful.
- Cordial, any medicine that increases strength and raises the spirits.
- Cornea, the transparent part of the eye.
- Corroborants, tonics.
- Corrosive, substances that consume or eat away, as aquafortis.
- Cosmetic, beautifying.
- Costic, having the excrements obstructed or the motion of the bowels too slow.
- Crassamentum, the thick part of any fluid, particularly applied to the clot of the blood.
- Crepitis, the cracking of fractured bones; a discharge of wind from the anus.
- Crucible, a chemical vessel used for melting ores.
- Crude, raw.
- Crudity, rawness, indigestion.
- Cutaneous, existing on the skin; belonging to the skin.
- Cuticle, the thin exterior coat of the skin which rises in a blister.
- Debauch, excess in eating or drinking; drunkenness, lewdness.
- Debility, feebleness, languor of body.
- Decoction, a preparation by boiling.
- Decumbent, lying down or declining.
- Defluxion, an inflammation of a part attended with increased secretion.
- Degenerate, to become worse.
- Deglutition Deglutition, the act of swallowing.
- Dejections alvine, evacuations by the bowels.
- Deleterious, poisonous, deadly.
- Delirious, light headed.
- Delirium, light headedness.
- Demoniacal, baneful, hurtful.
- Demulcents, soothing, mucilaginous teas, as flax-seed tea.
- Dentition, teething.
- Depletion, reducing the strength by bleeding, or by depletive medicines.
- Detergent, cleansing.
- Diachylon, an emollient plaster.
- Diagnosis, the distinguishing marks of particular diseases.
- Diaphoresis, increased perspiration.
- Diaphoretic, promoting perspiration.
- Diaphragm, the muscular partition between the chest and abdomen.
- Diastole, a dilation of the heart, auricles and arteries.
- Diathesis, habit or disposition of the body.
- Dietetic, relating to diet or regimen.
- Digestion, the process of dissolving food in the stomach.
- Dilate, to widen; to enlarge.
- Diluents, bland drinks.
- Diminution, lessening.
- Discutient, a medicine that has the power to repel.
- Dislocate, a joint put out of place.
- Disposition, tendency.
- Dissect, to cut in pieces.
- Distention, the act of stretching in all directions.
- Diuretic, medicine that increase the flow of urine.
- Dormant, not in action.
- Dossil, a portion of lint made in the form of a cylinder.
- Drastics, active or strong purges.

**Drocephalus**, dropsy of the brain.  
**Dropsical**, inclined to the dropsy.  
**Dropsy**, an unnatural collection of water in any part of the body.  
**Duct**, a tube which conducts fluids or other substances.  
**Dulcify**, to sweeten, to free from acidity or acrimony.  
**Duodenum**, the first twelve inches of the small intestines.  
**Dura and Pia**, the integuments of the brain.  
**Dyspeptic**, belonging to bad digestion.  
**Dysuria**, difficulty and pain in passing urine.

**Echymosis**, a tumor, the effect of blood letting.

**Effeminate**, weak, womanish.

**Effervescence**, that commotion of a fluid which takes place when some part of the mass flies off in an elastic form, producing innumerable small bubbles.

**Efflorescence**, eruption, or the redness round it.

**Effluvia**, a noxious vapor that exhales from all earthly bodies.

**Effusion**, the act of pouring out as a liquid.

**Ejections**, discharge from the stomach by vomiting.

**Electric**, any substance capable of exhibiting electricity when excited by friction.

**Elongation**, the extension of a part beyond its natural dimensions.

**Emaciation**, wasting of flesh.

**Emancipate**, to set free.

**Embrocate**, to moisten and rub a diseased part of the body with a liquid substance.

**Embryo**, the first rudiments of an animal in the womb before the several members are distinctly formed.

**Emesis**, vomiting.

**Emetic**, a medicine that causes vomiting.

**Emollient**, a medicine that softens or relaxes or sheathes the solids.

**Empiric**, a quack.

**Emulsion**, a milk-like fluid, formed by mixing oily or resinous substances together by means of mucilage with water.

**Enamel**, the outside covering of the teeth.

**Encephalic**, relating to the cavity of the skull.

**Encephalon**, the brain with its membranes.

**Endemic**, a disease peculiar to a certain district.

**Enema**, a clyster, an injection.

**Enervate**, to weaken.

**Engorgement**, an accumulation and stagnation of the fluids in a part.

**Enuresis**, involuntary discharge of urine.

**Epidemic**, contagious.

**Epidermis**, the outer skin.

**Epileptic**, consisting of epilepsy.

**Epispastics**; substances that blister the skin, as spanish flies.

**Epistaxis**, bleeding at the nose.

**Equilibrium**, equal in weight.

**Eradicate**, to destroy, to root out.

**Erection**, a beleh.

**Eruption**, breaking out in pustules.

**Errhines**, substances used to cause sneezing.

**Erysipelas**, St. Anthony's fire.

**Erythema**, a slight inflammation of the skin.

**Eschar**, the scab occasioned by burns or caustic applications.

**Esophagus**, the gullet.

**Exacerbation**, the increase of a disease.

**Evacuation**, a discharge from the bowels.

**Exanthemata**, acute eruptive diseases.

**Excitability**, easily excited by stimulants.

**Excitement**, the action caused by stimulants.

**Excoriation**, the loss of the skin.

**Excrements**, discharges from the bowels.

**Excrement**, a superfluous part.

**Excretory**, having the power of excreting.

**Excretion**, a separation of some fluid from the blood by means of the glands; the discharge of animal fluids from the body.

**Exhale**, to send out; to emit; to evaporate.

**Exhalant**, having the power to exhale.

**Exhibit**, to administer.

**Expectorants**, medicine that promotes spitting.

**Exsanguious**, bloodless, with but little blood.

**Exsiccate**, to evaporate moisture.

**Extraneous**, not belonging to.

**Extravasated**, forced or let out of its proper vessels.

**Exude or Exsud**, to discharge moisture through the pores.

**Fæces**, excrements.

**Factitious**, artificial; not natural.

**Farinaceous**, made of meal.

**Farcical**, ludicrous; deceptive.

**Fascia**, a tendinous expansion.

**Fatuity**, feebleness of intellect.

**Fauces**, pharynx; throat.



- Febrifuge**, medicine that has the power of arresting the progress of intermittent fever, as bark.
- Febrile**, feverish.
- Feculent**, foul, with extraneous or impure substances.
- Fetid**, of an offensive smell.
- Fetor**, any strong offensive smell.
- Fibrous**, composed of small threads or fibres.
- Fibre**, a slender body which constitutes a part of the frame of animals.
- First passages**, stomach and bowels.
- Fistula**, a deep tube-like ulcer.
- Flatulence**, wind in the stomach.
- Flatulent**, producing wind.
- Flexible**, pliant, yielding to pressure.
- Flooding**, a preternatural discharge of blood from the womb.
- Florid**, of a lively red color.
- Fœtus**, the child in the womb.
- Fomentation**, partial bathing by the application of flannels dipped in liquids.
- Foramen**, an opening, or hole.
- Formula**, a prescription.
- Fracture**, a broken bone.
- Friction**, the act of rubbing.
- Fumigation**, a vapor raised by burning.
- Function**, the action or office performed by an organ.
- Fungus**, proud flesh.
- Funnel**, a kind of a tunnel.
- Gangrene**, a feeble circulation followed by mortification.
- Gargle**, a wash for the mouth and throat.
- Gastralgia**, pains in the stomach without fever.
- Gastric**, relating to the stomach.
- Gastritis**, inflammation of the stomach.
- Gastro-enteritis**, inflammation of the stomach and bowels.
- Gestation**, exercise without bodily exertion, as riding in a carriage.
- Giddiness**, a swimming of the head.
- Gland**, a secretory organ.
- Glutinous**, gluey, sticky.
- Glottis**, the narrow opening at the upper part of the windpipe.
- Gormandizer**, a greedy voracious eater.
- Granulation**, the act of forming into grains.
- Grotesque**, whimsical figures or scenery.
- Grinding**, or after-pains; pains that occur after labor.
- Gullet**, the passage by which food is taken into the stomach.
- Gustatory**, relating to the taste.
- Gultatim**, by drops.
- Hæmatemesis**, vomiting of blood.
- Hæmaturia**, voiding bloody urine.
- Hæmoptysis**, bleeding from the lungs.
- Hectic**, a habitual fever.
- Hectic**, habitual, denoting a slow continued fever which precedes and accompanies consumption.
- Hemicrania**, pain on one side of the head.
- Hemiplegia**, a palsy that affects one half of the body.
- Hemorrhoids** or **Hemorrhoids**, piles.
- Hemorrhages**, a flux of blood proceeding from the rupture of a blood vessel, or from some other cause.
- Hepatic**, relating to the liver.
- Hereditary**, that is or may be transmitted from a parent to a child.
- Hernia**, a rupture.
- Herpetic**, having the character of tetter.
- Humoral**, relating to the fluids, particularly the blood.
- Hydragogue**, a purge that produces watery stools.
- Hydrocele**, a dropsy of the scrotum.
- Hydrocephalus**, dropsy in the head.
- Hydropic**, dropsical.
- Hydrophobia**, dread of water.
- Hydrothorax**, dropsy in the chest.
- Hyperscatharsis**, excessive purging.
- Hypochondria**, a disease causing debility, depression of spirits and melancholy.
- Iatroleptic**, the application of remedies externally.
- Ichor**, a thin watery matter.
- Icteroide**, yellow, jaundice-like.
- Idiopathic**, an original affection of a part.
- Idiosyncrasy**, any peculiar habit.
- Ileum**, the lower part of the small intestines.
- Iliac**, pertaining to the lower bowels or the ileum.
- Iliac-passion**, a violent and dangerous kind of colic.
- Iliac-regions**, the flanks, the lateral and lower parts of the abdomen.
- Imbecility**, debility, weakness.
- Immobility**, unmovableness, fixedness in place or state.
- Impetigo**, a species of ringworm.
- Implicate**, to enfold; to entangle.
- Imposthume**, a collection of purulent matter.
- Impregnate**, to infuse the principle of conception.
- Inanition**, } emptiness.
- Inanition**, } emptiness.
- Inaptitude**, unfitness; unsuitableness.
- Incantation**, the act of enchanting; enchantment.
- Incarnating**, healing.
- Incipient**, beginning; commencing.

Incision, cutting; a cut; a gash.  
 Incoherent, wanting cohesion.  
 Incrassate, to thicken.  
 Indigenous, produced naturally in a country.  
 Indigestion, a failure in the change of food which prepares it for nutriment.  
 Indurate, hard; dried.  
 Induration, the act of growing hard.  
 Infallible, not liable to fail.  
 Infection, the act of infecting.  
 Inflammation, violent excitement; heat.  
 Inflated, swelled or distended with air; puffed up.  
 Infusion, the act of pouring in.  
 Inhale, to draw into the lungs.  
 Inject, to throw in.  
 Injection, the act of throwing in.  
 Inoculate, to insert contagious matter in the flesh.  
 Inoculation, the act of inoculating.  
 Insidious, lying in wait; treacherous.  
 Inspissate, to thicken.  
 Intercostal, lying between the ribs.  
 Integuments, the skin.  
 Interim, the meantime; time intervening.  
 Internal, inward; interior; not external.  
 Internally, inwardly.  
 Interstices, spaces between things; but chiefly a narrow or small space between the parts which compose a body.  
 Intertropical, situated between the tropics.  
 Intestinal, belonging to the intestines or guts.  
 Intestines, the bowels.  
 Irrespirable, unfit to be breathed.  
 Irritability, the capacity of being excited into action.  
 Ischuria, difficulty or stoppage of the urine.  
 Jejunum, the small intestine comprised between the duodenum and ileum.  
 Jugular, a large vein in the neck.  
 Julap, simple or compound mixtures.  
 Lactary, milky; full of white juice.  
 Lactation, the act of suckling.  
 Lacteals, vessels containing chyle.  
 Languor, the want of strength or spirits.  
 Larynx, the upper part of the wind pipe.  
 Lassitude, a morbid sensation of languor which often precedes disease.  
 Laxatives, relieving costiveness.  
 Lethargy, continued or profound sleep from which a person can scarcely be awakened.

Leucophlegmatic, a pale, relaxed, debilitated and torpid state of the body.  
 Leucorrhœa, the whites.  
 Levigated, reduced to a fine powder.  
 Ligature, bandage.  
 Ligneous, woody.  
 Limpid, pure clear, transparent.  
 Liniment, a very thin ointment.  
 Listlessness, inattention; heedlessness; indifference.  
 Lithiasis, a disposition to discharge gravelly matter with the urine.  
 Lithontriptic, a remedy used for dissolving stones in the kidneys or bladder.  
 Lithotomy, the art of cutting for the stone in the bladder.  
 Livery, appearance.  
 Livid, black and blue.  
 Lobe, the division of the lungs, liver, &c.  
 Lobed, lip-shaped, or divided.  
 Longitudinal, extending in length.  
 Lotion, a wash.  
 Lochial discharge, a discharge from the womb.  
 Lubricate, to make smooth or slippery.  
 Lumbage, a pain in the loins and small of the back, such as precedes certain fevers; rheumatism in the loins;  
 Luminous, shining; emitting light.  
 Luxation, dislocation.  
 Lymphatics, vessels which carry white fluids.  
 Magnetic, possessing the properties of loadstone.  
 Malaria, pestiferous exhalations from marshes and putrifying substances.  
 Mal-conformation, ill form; disproportion of parts.  
 Malignant, dangerous to life.  
 Marmalade, the pulp of quinces boiled into a consistence with sugar.  
 Masticate, to chew.  
 Maturity, of full years.  
 Meconium, the infants first or black stools.  
 Meliorate, to grow better; to make better.  
 Membrane, a web of fibres, interwoven for covering certain parts.  
 Meninges, the covering of the brain.  
 Meningitis, inflammation of the meninges.  
 Menses, } the monthly courses.  
 Menstruation, }  
 Menstruum, any substance which dissolves a solid body.  
 Mephitic, suffocating; noxious.  
 Mesentary a fatty membrane placed in the middle of the intestines.

Mesocolon, a part of the mesentery.  
 Metastasis, a translation of a disease from one part to another.  
 Miasm, }  
 Miasmatic, } the same as Malaria.  
 Micturition, the act of making water or passing the urine.  
 Miliary eruption, an eruption of pustules resembling the seeds of millet.  
 Militate, to act in opposition.  
 Miscarriage, the act of bringing forth before the time.  
 Mitigate, to alleviate; to assuage.  
 Morbid, diseased; corrupt.  
 Morbific, capable of causing diseases.  
 Mucilage, a glutinous slimy substance.  
 Mucilaginous, slimy; ropy.  
 Mucus, resembling the matter discharged from the nose.  
 Muriatic, having the nature of brine or salt water.  
 Muscle, the organs of motion, consisting of fibres.  
 Muscular, strong; brawny; vigorous.  
 Narcotics, medicines producing torpor or sleep.  
 Nausea, an inclination to vomit.  
 Nervous, irritable.  
 Nephritic, affections of the kidneys.  
 Neuralgia, painful affection of the nerves.  
 Normal, natural; healthy.  
 Nosologist, one who understands nosology.  
 Nosology, a systematic arrangement, explanation, and definition of diseases.  
 Noxious, unwholesome; insalubrious.  
 Nutritious, nourishing.  
 Nutritive, having the quality of nourishing; alimental.  
 Obnoxious, offensive; noxious.  
 Obviate, to oppose; to remove.  
 Oedemations, swelled, as in a dropsical state of the skin.  
 Omentum, the caul on epiploon; a membranaceous covering of the bowels.  
 Ophthalmia, inflammation of the eyes.  
 Opiate, medicine that produce sleep.  
 Opprobrium, approach mingled with contempt.  
 Orbit, the cavity in which the eye is situated.  
 Organic Casion, a disease that concerns the organ itself.  
 Organic, pertaining to an organ or organs.  
 Orifice, the mouth or aperture of a tube or pipe.  
 Orthopnea, great difficulty in breathing.

Ossa Pubis, the bones of the pelvis or basin in females.  
 Ossified, changed into a bony structure.  
 Osuteri, mouth of the womb.  
 Palliate, to reduce in violence; to mitigate; to lessen or abate.  
 Palpitate, to flutter, to move, with little throes, to go pit-a-pat.  
 Palpitation, a preternatural beating of the heart excited by violent action of the body, by fear, fright, or disease.  
 Pancreas, the sweet-bread.  
 Papulous, full of pimples or pustules.  
 Parocentesis, tapping.  
 Paralysis, palsy.  
 Paroxysm, a periodical fit or attack.  
 Parturition, the act of bringing forth, or being delivered of young.  
 Pathology, doctrine of the cause and nature of disease.  
 Pectoral, medicine adapted to cure diseases of the breast.  
 Pellet, a little ball, to form into little balls.  
 Pelvis, the bones of the lower part of the body.  
 Pendulus, hanging; swinging.  
 Penus, the stem.  
 Perinæum, the part between the vagina and fundament.  
 Pericardium, the membranous sack surrounding the heart.  
 Pericranium, the membrane that invests the skull.  
 Periodical, happening at regular periods.  
 Peristaltic, the motion by which the bowels push forward their contents.  
 Peritoneum, a thin, smooth, lubricous membrane investing the whole internal surface of the abdomen and nearly all the viscera contained in it.  
 Pernicious, destructive; having the power to kill or destroy.  
 Pestilential, infectious.  
 Petechiae, purple spots on the skin in malignant fevers.  
 Petechiae, spotted.  
 Pituritous, consisting of mucus.  
 Pharynx, the top of the gullet.  
 Phlegm, bronchial mucus; the thin viscid matter secreted in the throat.  
 Phlegmatic, abounding in phlegm; generating phlegm.  
 Phlegmonoid, } inflammatory; burning.  
 Phlegmonous }  
 Phlegmons, internal inflammation attended with burning heat.  
 Phlogistic, inflammatory.  
 Phrenitis, inflammation of the brain.  
 Phthisical, consumptive.

- Physiognomy, the art of judging the disposition or disease by the countenance.
- Placenta-cake—see after-birth.
- Plenitude, fullness of blood.
- Plethora, } of a full habit.  
Plethoric, }
- Pleura, a thin membrane which covers the inside of the thorax.
- Pleuritic, of the character of pleurisy.
- Pneumonia, inflammation of the lungs.
- Polypus, a tumor with a narrow base like a pear, found in the nose, uterus, &c.
- Post mortem, after death.
- Preclude, to prevent from taking place.
- Precordia, the diaphragm; the abdominal viscera.
- Predisposed, } susceptibility of  
Predisposition, } ease.
- Pregnant, being with young.
- Premature, happening before the proper time.
- Preternatural, unusual; not natural.
- Primary, first in order of time; original.
- Procreate, to generate and produce.
- Procreation, generation and production of young.
- Prognosis, the art of foretelling the event of a disease.
- Prognostics, judgment of the event of the disease formed by the symptoms.
- Prolapsus, the falling down or out.
- Prolific, producing young or fruit.
- Prophylactic, a preventative.
- Propulsion, the act of driving forward.
- Protract, to prolong.
- Protrude, to shoot forward; to be thrust forward.
- Prostate gland, a gland situated at the neck of the bladder.
- Protuberance, a swelling or tumor on the body.
- Proximate cause, the immediate cause of the disease.
- Ptyalism, salivation.
- Pubes, the state of puberty.
- Puberty, the age at which persons are capable of procreating.
- Pudendum, the organs of generation, usually applied to females.
- Puerpal, of or belonging to child-bed.
- Pulmonary, belonging to the lungs.
- Pulsation, the beating of the heart or an artery.
- Pultaceous, macerated; softened; nearly fluid.
- Puncture, to pierce with a small pointed instrument.
- Purgative, having the power of evacuating the bowels.
- Purulent, matter of good quality.
- Puruloid, resembling pus or matter.
- Pus, the yellowish thick fluid or matter formed by inflammation.
- Pustulation, the act of forming into blisters.
- Pustulate, to form into pustules.
- Pustules, a small swelling.
- Putrefaction, a natural process by which animal and vegetable substances are disorganized or dissolved.
- Putrescence, rottenness.
- Putrid, corrupt; rotten; malignant.
- Pylorous, the lower orifice of the stomach.
- Pyrexia, fever.
- Pyrosis, water-brash, or the heart-burn.
- Rabid, mad; as a rabid dog.
- Rachialgia, colic with vomiting and costiveness.
- Rachitis, rickets.
- Raillery, jesting language.
- Ramollissement, softening.
- Recession, withdrawing or retreating.
- Rectum, the strait gut in which the faeces are contained.
- Recumbent, leaning; reclining; reposing; inactive.
- Red-gum, an eruption so called.
- Redundant, superfluous.
- Refrigerant, cooling; allaying heat.
- Refrigerate, to cool; to allay the heat of; to refresh.
- Regimen, regulation of food, air, exercise, &c.
- Regurgitation, the act of pouring back; the act of swallowing again; reabsorption.
- Relapse, a reattack of a disease.
- Relax, to relieve from constipation; to relieve.
- Relaxation, an opening or loosening.
- Remote cause, the inducing cause of disease.
- Renovation, the act of renewing.
- Repellents, a medicines which drives back morbid humors into the mass of blood from which they were unduly secreted.
- Repletion, fullness of blood; plethora filling the body with food.
- Resolution, a termination without suppuration.
- Resolvents, dissolving medicines.
- Respiration; the act of breathing.
- Resuscitation, reviving; bringing to life.
- Retching, heaving to vomit.
- Retention, retaining some natural discharge.
- Retraction, the act of withdrawing something advanced, or changing something done.
- Retrocession, the act of going back.
- Retrovert, to turn back.



**Damaged Pages:**

**P. 881-882**



- Rheum, a thin serous fluid secreted by the mucus glands; an inflammatory action of any organ.
- Rheumy, an acrid discharge.
- Routine, an regular habit not accommodated to circumstances.
- Rubefacients external applications that inflame the skin.
- Rupture, the act of breaking or bursting; the state of being broken or violently parted; a preternatural protrusion of the contents of the abdomen.
- Sabaceous, suet-like matter.
- Saccharine, having the quality of sugar.
- Saline, consisting of salt.
- Saliva, spittle.
- Salivary, pertaining to saliva; secreting or conveying saliva.
- Salubrious, healthful.
- Salutary, wholesome; healthful;
- Sanative, healing.
- Sanguiferous, conveying blood.
- Sanguine, abounding with blood; plethoric.
- Saponaceous, soapy.
- Saturate, to unite with till no more can be received.
- Saturine lotion, lead water.
- Scarificator, an instrument used to scarify.
- Scarify, to make small incisions with a scarificator or lancet.
- Scarlatina, the scarlet fever; in popular language the canker rash.
- Sciatic, } pertaining to the hip.
- Sciatica, } rheumatism in the hip.
- Scirrhusity, an induration of the glands.
- Scirrhus, a hard degenerated tumefaction of a gland.
- Scorbutics, of, or belonging to, scurvy.
- Scrofulous, of, or belong to, the king's evil.
- Scrotum, the bag which contains the testicles.
- Secrete, to separate a fluid from the blood.
- Secretion, the separation of a fluid from the blood by the act of a living organ.
- Secretory vessels, organs that separate fluids from the blood.
- Secundives, the placenta and membranes.
- Sedatives, composing medicines.
- Sedentary, with but little exercise.
- Sediments, settlings.
- Semen, the seed.
- Semicupeum, warm bath, the body being immersed only up to the middle.
- Sensorium, the brain, the centre of feeling.
- Serous, watery.
- Serrated, notched like a saw.
- Serum, the thin transparent of the blood.
- Seton, a few horse hairs or small threads, drawn through the skin by a large needle, by which a small opening is made and continued for the discharge of humors.
- Sexual, pertaining to sex or the sexes.
- Symphysis, the union of the ossa pubis.
- Sinapism, a poultice made of flour, mustard, or vinegar.
- Slough, the parts that separate from a sore.
- Soluble, loose, laxative.
- Solution, the process of dissolving into a fluid.
- Spasm, cramp, convulsion.
- Spasmodic, consisting in spasm; a medicine good for relieving spasm.
- Specific, an infallible remedy.
- Sphincter, a muscle that contracts or shuts.
- Spine, the back bone.
- Spiral, rising like the thread of a screw.
- Spontaneous, voluntary.
- Stamina, the habit of the body.
- Steretorious, barrenness, unproductiveness.
- Stimulants, irritative medicines.
- Stimuli, fluid of stimulant.
- Strangury, difficulty of making water.
- Striated, channeled, furrowed.
- Stridulous, making a small harsh sound.
- Strumous, scrofulous.
- Stupor, a suspension of sensibility.
- Styptic, a medicine stopping the discharge of blood.
- Sub-acute, moderately acute.
- Sub-jacent, being in a lower situation.
- Subordinate, inferior, in order.
- Subsequent, following after.
- Subservient, acting as a subordinate instrument.
- Subsultus tendinum, a convulsive, sudden twitching of the sinews.
- Luccedaneum, a substitute.
- Succulent, full of juice.
- Sudorifics, medicines which cause sweat.
- Supervene, to come upon; to happen to.
- Suppository, a long tube introduced into the rectum to produce stool when clysters cannot be used.
- Suppression, the obstruction or mo retention of discharges.
- Suppurant, having a tendency to purate.
- Suppurate, to generate puss.
- Suppuration, the process of puss as an abscess.
- Swooning, fainting.

- Symptomatic, the consequence of some other affection.
- Syncope, fainting or swooning.
- Systole, the contraction of the heart for expelling the blood and carrying on the circulation.
- Tarsus, the edge of the eye-lid.
- Temperament, a peculiar habit of the body.
- Temperature, state of the air.
- Tenacious retentive, adhesive; sticky.
- Tendon, a bundle of fibres by which a muscle is attached to a bone.
- Tendinous, full of tendons; sinewy.
- Tenesmus, an ineffectual and painful urging to go to stool.
- Tense, strained to stiffness; rigid, not lax.
- Tension, the state of being strained to stiffness.
- Tepid, luke-warm.
- Tertian, returning every third day.
- Testicles, the male organs of generation.
- Tetany, the lock-jaw.
- Texture, the arrangement of the parts which form an organ.
- Therapeutic, relating to the employment of remedies.
- Thoracic, belonging to the chest.
- Thorax, the chest.
- Tonic, bracing, strengthening.
- Tonsil, a glandular body at the passage from the mouth to the pharynx.
- Tonsillary, pertaining to the tonsils.
- Topical, pertaining to a general head.
- Tormina, griping pain.
- Torpid, inactive.
- Tournequet, a surgical instrument used to check hemorrhages.
- Trachea, the windpipe.
- Transition, change.
- Tremor, an involuntary trembling; shaking.
- Tremulous, trembling; affected with fear or timidity.
- Tubercle, a pimple.
- Tumefaction, a swelling; a rising.
- Tumor, a morbid entanglement of any part of the body.
- Tunic, a natural covering, an integument.
- Turgescence, the act of swelling; the state of being swelled.
- Turgid, swelled; bloated.
- Tympanum, the drum of the ear.
- Ulcerous, having the nature of an ulcer.
- Umbilical-cord, the naval string.
- Ureters, the tubes which convey the urine from the kidneys to the bladder.
- Urethra, the canal which conveys the urine.
- Uric, of, or belonging to, the urine.
- Urinary, pertaining to urine.
- Urine, animal water.
- Uterine, belonging to the womb.
- Uterus, the womb.
- Utero-gestation, the term of pregnancy.
- Uvula, the lower part of the palate.
- Vaccine, vaccinous, belonging to, or matter of the cow-pox.
- Vagina, the passage to the womb.
- Variolus, small-pox matter.
- Vascular, belonging to the vessel.
- Veneral, pertaining to sexual intercourse.
- Venæra, the pleasures of the bed.
- Venesection, blood-letting.
- Venous, belonging to the veins.
- Venomous, poisonous.
- Ventilate, to air; to give circulation to pure air.
- Ventricle, a small cavity in the body.
- Vermifuge, a medicine to destroy or expel worms from animal bodies.
- Vertebra, a joint of the spine or back bone.
- Vertigo, giddiness.
- Vesicating, blistering.
- Vesication, the act of blistering.
- Vesicle, a little bladder, or a portion of the cuticle separated from the skin and filled with humor.
- Vicissitudes, changing from one thing to another.
- Virulent, poisonous.
- Villous, shaggy; rough; hairy.
- Virous, poisonous matter.
- Viscera, the entrails.
- Viscid, glutinous, tenacious.
- Viscous, clammy; sticky; adhesive.
- Vital, the seat of life.
- Volatile, subject to evaporate.
- Volatility, disposition to exhale or evaporate.
- Vomica, a tumor on the lungs enclosed in a vesicle.
- Vomit, puke.
- Vulnerary, useful in the cure of wounds.
- Whites, the discharge from the uterus.

r, a sore generally ill-conditioned.  
etc, to form into an ulcer.



# INDEX.

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	Page.		Page.
Affections of the mind,	132	Chicken pox,	369
Air, observations on,	101	Common cough,	273
Ablutions, frequent necessity of	126	Corns,	357
Ague or intermittent fever,	166	Continued fevers,	190
Anger,	132	Countenance, appearance of, in-	
Apoplexy,	421	dicative of disease,	151
Asthma,	443	Cleanliness, observations on,	124
Accidents, observations of,	678	Clothing, observations on,	113
of compound,	706	Cramp,	439
Amputations, gen'l obser. of,	706	Cholera morbus,	450
arm,	707	Chilblains,	481
thigh,	709	Common ulcers,	487
leg,	709	Compression of the brain,	682
fore arm,	710	Colic,	526
fingers and toes,	711	Cramp of the stomach,	545
concluding remarks on,	712	Convulsive fits,	547
		Congestive fever,	675
Bread,	2	Contusion or blow,	680
Broths and soups,	17	"    of the brain,	681
Bilious fever,	181	Catheter,	712
Bastard pleurisy,	250	Catheters, method for using,	713
Bilious pleurisy,	257	Cholera,	728
Boiled grain,	6		
Butter,	8	Diaphragm, inflammation of,	255
Bloody urine,	406	Deafness,	337
Bad effects of unwholesome air		Difficulty of urine,	399
on children,	39	Diseases, physiognomy of,	151
Bladder, inflammation of,	293	Diet, observations on,	1
Brain, inflammation of,	305	Damp beds to be avoided,	144
Bleeding and blind piles,	404	Damp houses,	145
Bloody flux,	409	Diseases, definition of,	156
Blood, vomiting of,	413	Diseased parents,	25
Bites of musketoes,	477	Differences between animal and	
Bites of venomous serpents,	478	vegetable food,	22
Bite of a mad dog,	479	Diseases, general causes of,	22
Biles,	486	Dysentery,	409
Blood-letting,	509	Diabetes,	418
Black tongue,	674	Drinking cold water when over-	
		heated,	453
Children, clothing of,	26	Dropsy,	455
food of,	31	Drowned, apparently, how to re-	
exercise of,	35	cover,	475
Consumption, pulmonary,	309	Dislocations,	499, 701
Cancer,	353	of the jaw,	500, 701
Cow pox,	358	shoulder,	501, 702
Cold,	259	elbow,	502, 703

	Page.		Page.
Dislocation of the thigh,	502, 703	Glossary,	873
collar bone,	702	Head, injuries of,	503
wrist, fingers, &c.,	703	Hydrophobia,	479
knee pan,	704	Head ache,	334
leg,	704	Heat, extreme, effects of,	427
foot,	705	Hysteric fits,	432
Dyspepsia,	519	Hypochondriac disease,	436
Diet for the sick,	859	Heart, palpitation of,	440
Exercise of children,	35	Hicup,	442
Exercise,	105	Heart burn,	449
Expectorations, observations on,	154	Intermittent fever,	166
Excrementitious discharges, ob-		Intemperance,	119
servations on,	154	Intemperance in eating,	120
Extremities, observations on,	155	Intemperance in drinking intoxi-	
Erysipelas, or St. Anthony's fire,	381	cating liquors,	121
Ear ache,	336	Infection,	128
Epileptic fits,	425	Inflammation of the lungs	244, 256
Effects of extreme heat,	427	Inflammatory continued fever,	193
Elbow, dislocations of,	502	Inflammation of the diaphragm,	255
Eyes, inflammation of,	513	Inflammation of the spleen,	288
Fruits and roots used for bread,	11	Inflammation of the kidneys,	289
Food in a medical point of view,	19	Inflammation of the bladder,	293
Fear, influence of,	133	Inflammation of the liver,	294
Fever, general observations on,	160	Inflammation of the stomach,	299
Fever, causes of,	163	Inflammation of the intestines,	301
Fever, symptoms of,	164	Inflammation of the brain,	305
Fever, intermittent or ague,	166	Itch	467
Fever, remittent or bilious,	181	Intoxication,	473
Fever, simple, continued,	190	Injuries of the head,	503
Fever, inflammatory, continued,	193	Issues,	511
Fever, typhus or nervous,	201	Inflammation of the eyes,	513
Fever, yellow or malignant,	238	Jaundice,	470
Fever, miliary,	233	Jaw, dislocation of,	500, 701
Fever, scarlet,	374	Kidneys, inflammation of,	289
Fever, congestive,	675	Kings evil,	469
Fever, typhoid,	201	Love,	136
Fever, winter,	347	Locked-jaw,	351
Fevers, prognosis of,	222	Lungs, inflammation of,	244, 256
Falling of the palate,	288	Laborious,	42
Food of children,	31	Liver, inflammation of,	294
Face, painful affections of the,	349	Lightning, persons apparently	
Fainting fits,	427	killed by, how to recover,	476
Fits, hysteric,	432	Mind, affections of,	132
Fractures of the ribs,	508	Miliary fever,	233
Fractures, general obs. on,	694	Measles,	370
of the nose,	694	Mumps,	286
jaw,	694	Melancholy, religious,	137
clavicle or collar bone,	695	Modified small pox,	368
arm,	696	Mad dogs, bites of,	479
fore arm,	697	Mortification,	496
wrist,	697	Non-naturals,	89
ribs,	698	Natural evacuations,	138
thigh,	698	Mr. Locke's advice on,	139
foot,	699	Night air to be guarded against,	144
Guinea worm,	480	Nervous fever,	201
Grain boiled,	6	Negro consumption,	537
Gravel, ruinous effects of,	134	Nurse's guide,	714
General cause of diseases,	22		
Gravel,	462		
Gravel and stone,	532		

	Page.		Page.
Observations on diet,	1	Swallowing of pins,	491
Perspiration, observations on,	141	Sprains and bruises,	498
Physiognomy of diseases,	151	Shoulder, dislocation of,	501, 702
Posture, observations on,	155	St. Vitus's dance,	542
Pneumonia,	244	Stomach, cramps of,	543
Peripneumonia,	256	Sardonic laugh,	546
Pleurisy,	245	Sprains,	681
Pleurisy, bastard,	250	Tongue, appearance of, indicative of disease,	153
Paraphrenitis, or inflammation of the diaphragm,	255	Teeth, appearance of, indicative of disease,	153
Pleurisy, bilious,	257	Typhus fever,	201
Phreuitis, or inflammation of the brain,	305	Typhoid fever,	201
Putrid sore throat,	282	Tooth ache,	338
Poisons,	343	Tetter or ring worm,	467
Palate, falling of,	288	Tumors or biles,	483
Prognosis of fevers,	222	Thigh, dislocation of,	502, 703
Peripneumonia notha,	250	Urine, remarks on,	140
Pulmonary consumption,	309	Urine, difficulty of,	399
Painful affections of the face,	349	Urine, bloody,	405
Piles,	402	Ulcers,	487
Piles, bleeding and blind,	404	Vomiting blood,	413
Palsy,	434	Vomiting,	414
Palpitation of the heart,	440	Whitlow,	460
Phthisie,	443	White swelling,	472
Persons apparently drowned, how to recover them,	475	Wounds,	491
Persons apparently killed by lightning, how to recover them,	476	observations of,	683
Prolapsus ani,	485	incised,	685
Quinsy,	277	punctured,	687
Remarks,	19	contused,	688
Religious melancholy,	137	of the ear and nose,	691
Lord Kaime's advice,	137	scalp,	691
Respiration,	153	throat,	691
Rheumatism,	339	chest,	692
Remittent or bilious fever,	181	belly,	692
Ruptures,	483	joints,	693
Ribs, fractures of,	508	tendons,	693
Simple continued fever,	190	DISEASES OF WOMEN.	
Spleen, inflammation of,	288	Abortion,	592
Sedentary, advice to,	42	After pains,	613
Studious people, remarks on,	49	Breasts, inflammation of,	614
diseases liable to,	49	Barrenness,	635
advice to,	50	Cessation of menses or courses,	569
Sleep,	110	Cautions during pregnancy,	580
Scarlet fever,	374	Colic,	583
St. Anthony's fire,	381	Cramp,	585
Sudden changes from heat to cold,	146	Constant desire to make water,	585
Structure of the human machine,	5	Chills,	612
Stomach, inflammation of,	299	Child bed fever,	616
Scalds and burns,	355	Cancer of the womb,	623
Small pox,	361	Diseases of women, obs. on,	551
Small pox modified,	368	Diseases of pregnancy,	581
Scurvy,	458	Difficult labor,	602
Skin, eruptions of,	465	Directions to midwives,	604
Scald head,	468		
Scrofula, or Kings evil,	469		
Sea sickness,	473		

	Page.		Page.
Directions after labor,	609	Womb, falling down of,	623
Dropsy of the ovarium,	632	Worms,	634
Delirium,	639		
		DISEASES OF CHILDREN.	
False pains,	588	Cholera infantum,	662
Flooding,	589	Croup,	659
Fainting,	612	Constipation,	651
Falling down of the womb,	623	Colic,	653
		Convulsions or fits,	657
Green sickness,	564		
Great discharge of menses,	566	Diseases of children,	642
Heart burn,	584	Fever of children,	651
Inflammations,	613	Measles,	667
Inflammation of the breast,	614	Meconium,	646
"        "        womb,	631		
		Original imperfections,	647
Legs, swelled,	585	Red gum,	650
Leg, swelled,	615		
Labor,	596	Snuffles,	647
Labor, difficult,	602	Still born,	643
Lochia,	611	Sore eyes,	654
		Scald head,	661
Menses or courses,	558	Thrash,	651
Menses, obstructed,	561	Treatment of new born infants	644
great discharge of,	566	Teething,	655
cessation of,	568		
Midwives, directions to,	604	Worms,	668
Milk fever,	615	Whooping cough,	665
Mole,	630		
Millary eruptions,	640	Yellow gum,	650
Obs. on diseases of women,	551	DISPENSATORY.	
Organs of generation,	554	Antimonial solution,	829
Obstructed menses,	561	Anti-bilious or aperient and dia-	
		phoretic pills,	830
Pregnancy,	574	Aloetic pills,	831
signs of,	578	Antimonial wine,	832
cautions during,	580	Antimonial solution as a diapho-	
diseases of,	581	retic,	833
Pains in the head and drowsiness,	584	Antimonial powder,	833
Piles,	588	Anodyne sudorific drops,	834
Pains, false,	588	Anodyne sudorific bolus,	834
Protrusion of the vagina,	622	Absorbents,	835
Polypus in the womb,	626	Absorbent mixture,	835
		Absorbent and aperient mixture,	835
Signs of pregnancy,	578	Anodynes,	839
Sickness of the stomach,	582	Anodyne draught,	839
Swelled legs,	585	Anti-spasmodics,	840
Swelled leg,	615	Astringents,	844
Stoppage of urine,	586	Alternatives,	849
Sleep, want of,	587	Astringent washes,	854
Soreness of the nipples,	637		
		Cathartics,	829
Twins,	602	Cathartic mixture,	830
		Croton oil,	831
Urine, stoppage of,	586	Camphorated powders,	833
		Calcine magnesia,	835
Vagina, protrusion of,	622		
Whites,	571		
Want of sleep,	587		



	Page.		Page.
Cream of tartar,	836	Tonics,	845
Cough mixtures,	838	Tinctures,	850
Cordials,	841		
Clysters,	855	Whooping cough, remedies for,	838
		MATERIA MEDICA.	
Diaphoretics,	332	Agaric,	745
Diaphoretic drops,	832	Agrimony,	745
Dover's powders,	833	Alder, black,	745
Demulcent drinks,	834	Alexander,	746
Diuretics,	835	Angelica,	746
Diuretics, mild,	835	Apple, Peru,	746
Dulcified spirits of nitre,	835	Arbutus,	746
Diuretic infusion,	836	Arrow root,	746
Diuretic pills,	836	Asarabacca, swamp,	747
Diuretics, stimulating,	837	Avens, common,	747
Emetics,	829	Back-ache brake,	747
Effervescing draught,	833	Balm,	747
Expectorants,	837	Barberry,	747
Elixirs, &c.,	850	Bastard ipecacuanha,	748
Eye water,	853	Bayberry,	748
		Bearberry,	748
Febrifuge powders,	833	Beech drops,	748
Febrifuge mixture,	833	Benne,	748
		Beth root,	748
Gargles,	854	Bind weed,	748
		Bitter sweet,	748
Infusion of Virginia snake root,	834	Blackberry,	749
		Black snake root,	749
Juniper oil,	836	Blazing star,	749
		Blood root,	749
Laxatives,	830	Bloodworth, striped,	750
Lime water,	835	Blue cardinal flowers,	750
Liniments,	852	Boneset,	750
		Bowman's root,	750
Mild diuretics,	835	Box wood,	750
Morphine,	840	Broom rape, Virginia,	750
		Buck thorn,	751
Nitric lac ammonia,	837	Burdock,	751
Nitrous lozenges,	837	Burnt Saxifrage,	751
		Butterfly weed,	751
Oil of juniper,	836	Butter nut,	751
Opium,	839	Button snake root,	751
Opiate pills,	839		
Ointments,	856		
Purgatives,	830	Calico tree,	752
Purgative infusion,	831	Calimus, or sweet flag,	752
Purgative powder,	831	Camomile,	752
Purgative electuary,	831	Camomile, wild,	752
Prepared chalk,	835	Cancer root,	752
Parsley,	836	Candle-berry myrtle,	752
Pectoral mixture,	837	Caraway,	752
Pectoral emulsion,	338	Carrot, wild,	753
Pectoral lozenges,	839	Castor oil,	753
Paregoric,	840	Cat-gut, or goat's rue,	753
Poultices and cataplasm,	857	Celandine, the greater,	753
		Centaury,	754
Remedies for whooping cough,	838	Cherry tree, wild,	754
		Chick-weed, red,	754
Salt of tartar,	836	Cinquefoil,	754
Stimulants,	841	Cleavers,	754
		Cocum, <sup>l</sup>	754

	Page.		Page.
Cock-up-hat, or yaw weed,	754	Ground pine,	772
Cohush, or papoose root,	755	Guinea pepper,	773
Colt's foot,	755	Hart's tongue,	773
Columbo, Americum,	755	Hart's ear, or herb trinity,	773
Comfrey,	755	Heart snake root,	773
Coriander,	756	Helebore, white,	773
Cow parsnip,	756	Hemlock,	775
Crane's bill,	756	Henbane, black,	775
Cross wort,	757	Herb, bennet,	776
Crow foot,	757	Herb, trinity,	776
Cuckow,	758	Hog bed, or hog weed,	776
Cuckow bread,	758	Holy thistle,	776
Cuckow pint,	758	Hooded widow herb,	776
Cucumber root,	758	Hops,	776
Cure-all,	758	Horehound,	778
Currants,	758	Horse radish,	778
Custard, apple,	759	House leek,	779
		Hyssop,	779
Dandelion,	759		
Deadly night-shade,	759	Ice plant,	779
Deer berry,	759	Indian hemp,	779
Devil's bit,	759	Indian physic, or American ipe-	
Dewberry,	759	cacuanha,	780
Dill,	759	Indian tobacco,	780
Dock water,	759	Indian turnip,	780
Dogwood,	759	Indigo weed, or wild indigo,	780
Dragon's claw,	760	Ipecacuanha; American,	781
Dragon root,	760	Ivy,	781
Elder, common,	760	Jamestown, or Jimson weed,	781
Elecampane,	761	Jerusalem oak, or worm seed,	781
Elm, American or slippery,	761	Juniper, common,	781
Emetic weed, or Indian tobacco,	761		
Ergot, or spurred rye,	763	Lambkill,	781
Evergreen cassine,	764	Laurel,	781
		Lavender thrift,	781
Featherfew, or feverfew,	764	Lemon tree,	781
Fennel, sweet,	764	Lettuce,	783
Fern, female, or back ache brake	764	Lettuce, mild,	783
Fern, male,	764	Lichen, or lung wort,	783
Fever bush, or wild alspice,	764	Life root,	783
Fever root, or dragon's claw,	765	Lobelia, or blue cardinal flowers,	783
Fig tree,	765		
Flag, blue or water,	765	Madder, mild,	784
Flag, sweet,	765	Magnolia,	784
Flax seed,	765	Maiden hair,	784
Flea-bane, Philadelphia,	766	Male, fern,	785
Flower-de-luce,	766	Mallow, common,	785
Flux root,	766	Mandrake, or May apple,	785
Foxglove,	766	Marsh trefoil, or buck bean,	785
French apple	769	Marsh mallow,	786
Frost wort,	769	Marsh rosemary,	786
Fumitory,	769	Masterwort,	786
		Mayapple,	786
Garget,	769	May weed, or mild camomile,	786
Garlic, common,	769	Mezereon,	786
Gentian,	770	Milk, or silk weed,	787
Gillenia, common,	770	Milkwort, common,	787
Ginseng,	770	Miltwaste,	787
Golden rod or thread,	772	Mint,	787
Goose grass,	772	Mistletoe of the oak,	787
Ground holly,	772	Moorwort, broad-leaved,	787
Ground pine,	772	Motherwort,	787

	Page.		Page.
Mountain tea, or deer-berry,	788	Senicle, American,	803
Mouth root, or golden thread,	788	Sarsaparilla,	803
Mugwort or common worm wood,	788	Sassafras,	803
Mulberry tree,	788	Scull cap, blue,	803
Mullen,	789	Scurvy grass,	803
Mustard, black and white,	789	Senna, American,	803
		Skoke,	803
Nettle, stinging,	790	Skunk cabbage,	803
Night shade, American,	790	Snake root,	803
Night shade, deadly,	790	Soap wort,	809
		Sorrel,	809
Oak,	791	Southern wood,	810
Oak poison,	792	South sea tea, or yawpon,	810
Onions,	792	Spikenard,	810
Orange tree,	793	Spleen wort,	810
		Spruce Laurel,	810
Papu,	793	Squirrel ear, or edge leaf,	810
Papoose root,	793	Star grass,	811
Parsley-leaved, yellow root,	793	Stink weed,	811
Parsley, mild,	794	Strawberry,	811
Peach tree,	794	Sumach, common,	811
Pennyroyal,	795	Sundew,	812
Peppermint,	795	Swallow wort,	812
Pepper, red, or cayenne,	796		
Pink root, Carolina,	796	Tansey,	812
Piss wort,	797	Thorn apple,	812
Plantain,	797	Thoroughwort,	815
Pleurisy root,	797	Throat root,	816
Poison oak,	798	Thyme, garden,	816
Poke weed,	798	Tobacco,	816
Polygonum,	799	Toe Itch,	816
Polypody, common,	799	Tooth-ache tree,	816
Pomegranate,	799	Touchwood,	816
Poplar tree, or white wood,	800	Trefoil water,	816
Poppy, white,	800	Tulip bearing poplar,	817
Potato, sweet,	801	Turmeric,	817
Potato, mild,	801		
Prickly ash, and prickly yellow		Unicorn root,	817
wood,	801	Valerian, wild,	817
Prickly pear,	802	Violet, rattlesnake,	817
Pride of India or China,	802	Violet, sweet,	817
Puccoon,	803	Virgin's bower,	817
		Virginia, or black snake root,	818
Queen of the Meadows,	803		
Quince tree,	804	Wake robin,	819
		Walnut, white,	819
Radish,	804	Water cresses,	819
Raspberry,	804	Water trefoil,	819
Rattle, or seneka snake root,	804	White byony,	819
Rattlesnake violet,	806	White wood,	819
Red cedar,	806	Willow,	819
Rhubarb, mild,	806	Winterberry,	820
Rose,	806	Wintergreen,	820
Rose willow,	806	Wood betony,	820
Rue,	806	Worm seed,	820
		Wormwood,	820
Sage,	807		
Samson snake root,	807	Yarrow,	820

